NEW EQUIPMENT DIGEST

A Penton Publication

September, 1957

Volume 22—Number 9

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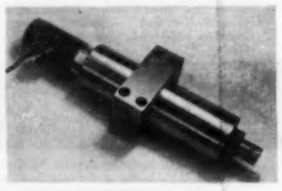
CHECK AND PASS ALONG

✓	NAME	See No.

Use Inquiry Slips—Pages 8 and 104

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

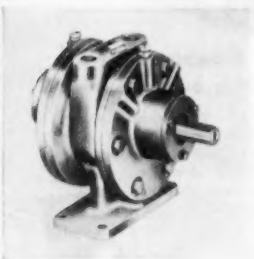
VALVE-CYLINDER UNIT
for clamping, locating, actuating



This Valve-N-Cylinder fixture clamp power package consists of a square rod air cylinder on which is mounted an electric three-way valve. Unit can be used for clamping, locating or pushing-off parts on production operations. Compact, fast-acting valve is easily connected into electrical sequence circuits and is rated 110 or 220 v, 60 cycles. Valve can be easily removed from cylinder, leaving a standard pipe port exposed. Thus, valve and air cylinder can be used separately. Unit is available with 1, 1½ and 2-in. bores, in strokes of 1, 2, 3 and 4 in. Made by **Beckett-Harcum Co.**, 1147 Wayne Rd., Wilmington, O.

▲ For more details circle **NED-1 J7** on enclosed inquiry slip ▲

REVERSIBLE AIR MOTOR
has ½-2 hp, 300-2000 rpm ratings



Pneumatic hoists or lifts, materials handling equipment, machine tool positioning and screw jacks can be powered with model 6AM reversible rotary air motor. It has a ½ to 2-hp range and motor ports which fit ⅜-in. standard pipe. Any four-way operating valve for pressures below 100 psi can be inserted in the air supply line for a reversing control. Models with single rotation, either right or left, are also offered. All weigh about 17 lb and have speeds variable from 300 to 2000 rpm on pressures from 30 to 90 psi. Mounting foot is standard and a muffler is included on nonreversible models. Made by **Gast Mfg. Corp.**, Dept. 43, Box 117N, Benton Harbor, Mich.

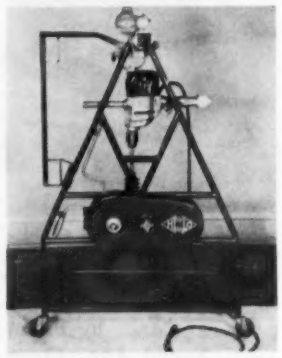
▲ For more details circle **NED-2 J7** on enclosed inquiry slip ▲

OPEN-SHELF FILING UNITS
now offered with slide-away doors

Cabinet - type, open-shelf Verti-File units are now available with slide-away doors, with or without locks. Variations to meet particular needs are obtainable. From one to seven doors per section can be ordered. Sections are either single or double-faced, with shelves adjustable on 1-in. vertical centers. Full - depth finished end panels and cornice-type tops with projecting caps provide protection against dust. Bottom shelves are elevated from floor to protect folios from wet-mopping damage. Five adjustable dividers are provided with each shelf and are 6 in. high and 9 in. deep. Several colors are offered in addition to standard baked enamel gray. Model D-1450 shown stands 67 in. high. Made by **Deluxe Metal Furniture Co.**, Dept. 100, 306 Struthers St., Warren, Pa.

▲ For more details circle **NED-3 J7** on enclosed inquiry slip ▲

POWERED WORK-STAGE LIFT
driven by portable electric drill

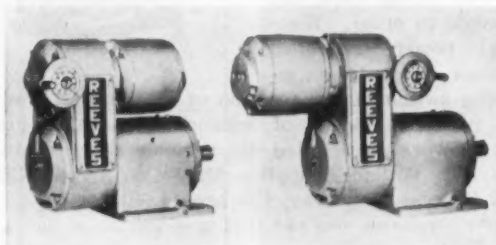


Painting, maintenance and other work on sides of buildings is facilitated by use of the all metal Hi-Lo powered stirrup. Worm gear and pinion drive will not move in either direction unless power is applied and a safety governor prevents accidental or excessive rate of descent. Power is supplied by a heavy duty electric drill. Stirrup can be threaded on the cable at any point. Clutching device locks the load automatically in case of power failure or when drill is removed. One-man cage for use with a single stirrup and metal stages for use with two or more units are available. Capacity per unit is 500 lb and weight is 90 lb. Made by **Bil-Jax, Inc.**, Dept. NED, Archbold, O.

▲ For more details circle **NED-4 J7** on enclosed inquiry slip ▲

VARIABLE SPEED DRIVES
1, 2 and 3-stage, 1 to 5-hp units

Wide speed variation ratios and speed ranges are featured in the 200 and 300 size Vari-Speed Motodrives. Reducers of the variable speed drives have single, double or triple stages and a wide range of compact assembly combinations. Latter includes seven models each of C and Z-flow styles, with vertical, 45-degree and horizontal models for 1 to 5-hp applications. Reeves line of automatic controls and other accessories and modifications are available. Made by **Reeves Pulley Co.**, 1227 Seventh St., Columbus, Ind.



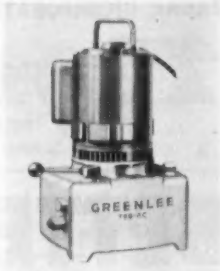
▲ For more details circle **NED-5 J7** on enclosed inquiry slip ▲

FOAMED PLASTIC
for cushioning and insulating use

Lightweight polyester-based urethane foam material is suited for use as a cushioning material and as a sound and thermal insulator. Called Polyfoam, it is less than half the weight of natural latex foam and reportedly has greater resiliency. High tensile strength makes it possible to sew or stitch directly through the material without tearing. It is compatible with most materials and withstands exposure to sunlight and air. Made by **General Tire & Rubber Co.**, Dept. W-10, 1708 Englewood Ave., Akron 9, O.

▲ For more details circle **NED-6 J7** on enclosed inquiry slip ▲

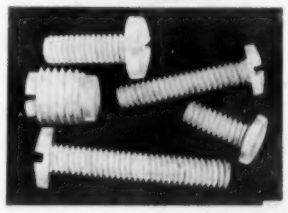
HYDRAULIC POWER PUMP
is self-contained and portable



Capable of working at a continuous pressure of 6000 psi and intermittently to 10,000 psi, this No. 798-AC-SA portable hydraulic power pump is driven by a ¾-hp 115/230-v motor. It is particularly suited for powering hydraulic pipe and conduit benders, presses, jacks, or rams. Instant fingertip control is possible with advance, neutral and return positions of the control lever. Valving gives high-pressure advance and allows spring action, manual or gravity return of the ram. Pump can also be supplied powered by a 4-cycle gasoline engine. Made by **Greenlee Tool Co.**, 2136 Twelfth St., Rockford, Ill.

▲ For more details circle **NED-7 J7** on enclosed inquiry slip ▲

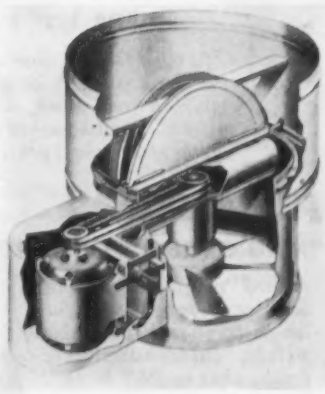
MOLDED NYLON SCREWS
in ⅜ to 1-in. lengths



Perfectly uniform, close tolerance molded nylon screws are now available in initial machine screw sizes of 6-32, 8-32 and 10-32, and range in length from ⅜ to 1 in. Headless set screws up to 5/16-in. OD and 13/32-in. long are also available. Threads are class 2, unified standard. Characteristic advantages of these screws, applicable to chemical, automotive, aircraft, food processing and metal-working uses, include electrical insulating value, high strength-to-weight ratio, temperature stability, and chemical and corrosion resistance. Their natural resilience assures tight, vibrationproof assembly without need for lock washers. Made by **Gries Reproducer Corp.**, 143 Beechwood Ave., New Rochelle, N. Y.

▲ For more details circle **NED-8 J7** on enclosed inquiry slip ▲

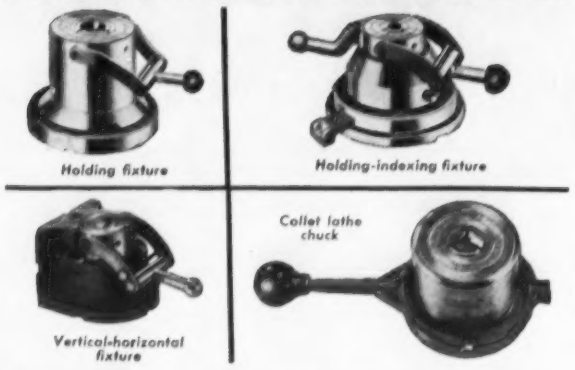
POWER ROOF VENTILATOR
air is ventilated high above roof



Powerful airfoil type fan mounted in a weatherproof casing of the Wingjet power roof ventilator propels air at high velocity far above the roof. Thus, the vitiated air is prevented from damaging roof surfaces, or re-entering the building through fresh air intakes or windows. Fan is covered by nonchattering, aluminum dampers which are held open by airstream as long as fan is operating, and close weather-tight when fan is off. Type B ventilator, with motor located out of airstream in weatherproof housing is for exhausting hot, corrosive or fume-laden air. Type C for exhausting uncontaminated air has motor connected directly to fan wheel. Made by **L. J. Wing Mfg. Co.**, 165 Vreeland Mills Rd., Linden, N. J.

▲ For more details circle **NED-9 J7** on enclosed inquiry slip ▲

GET A HOLD ON YOUR WORK



USE Zagar COLLET FIXTURES-

the most effective, economical, efficient devices for accurate production

A range of fixtures, ideal for milling, drilling, tapping, and grinding is offered by Zagar. Small parts production can now be handled economically, accurately, and profitably. All fixtures can be had in 1" and 2" capacities.

Get Manual "N-9" for more data.

ZAGAR, INCORPORATED 23880 Lakeland Blvd., Cleveland 23, Ohio

Zagar TOOLS FOR INDUSTRY and SPECIAL MACHINERY

For more details circle NED-10 J7 on enclosed inquiry slip

BETTER TOOLS MEAN A BETTER JOB

THE RIGHT TOOLS FOR YOUR JOB — P&R CO

"HANDY ANGLE" SAW

A portable hand saw that cuts just about everything—wood, steel pipe, sheet metal, masonite. Cuts its own starting hole. Amazingly compact but rugged too...and at a price that defies comparison. $14.75 Complete.

AVAILABLE NOW—Handy Angle Saw blades proved efficient for cutting stainless steel! Specify supreme blades.

"GRIPS RITE" Angle Head

FOR 1/2" ELECTRIC DRILLS

The right tool for close work—at its best when the going is tough. Special design fits comfortably in your hand. A 2-to-1 gear reduction gives maximum control in tight spots...3 flats on the shank shaft provide non-slip chucking.

PLANETOR

"MAGIC FEED" PORTABLE BITS

Famed "magic feed" bits in 53 sizes, 1" to 4½", tops for tough boring. Replaceable pilots, interchangeable heads, shanks 3½" to 18". One test will convince you. Write for detailed price list.

All PARCO TOOLS FULLY GUARANTEED

- For information contact your jobber or write direct to:

Price & Rutzebeck
P. O. Box 30 • Hayward, California

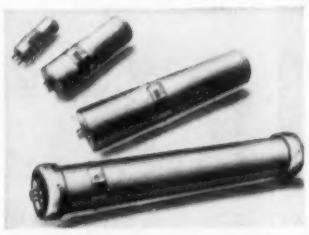
For more details circle NED-11 J7 on enclosed inquiry slip

For Future Guidance

NEW EQUIPMENT DIGEST is usually a pretty good barometer of industry. The volume of inquiries produced per item has been a sound index of business. Our total production of inquiries for the first six months of 1957 is at an all-time high. It is even more significant that there has been a 19 per cent increase in the average number of sales leads produced by each ad and editorial item. This is evidence that business is on a definite up-grade—that readers are anticipating future needs so that they can compete in a rapidly expanding market.

A. N. Gregg
EDITOR

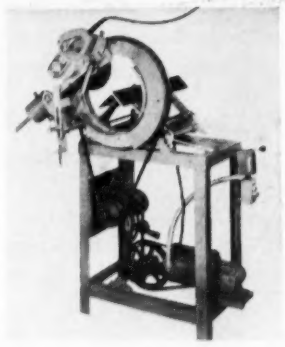
HYDRAULIC ACCUMULATORS
capacities are 10 cu in. to 10 gal



Designed for hydraulic service, piston type accumulators function as auxiliary or emergency sources of hydraulic power. They are also used for shock absorption to smooth out surges and prevent damage to components of system. Line includes 14 models ranging in oil capacity from 10 cu in. to 10 gal. They have SAE straight thread connection ports, with adapters for other style connections. Made by **Parker Appliance Co.**, Dept. NE, 17325 Euclid Ave., Cleveland 12, Ohio.

For more details circle NED-12 J7 on enclosed inquiry slip

ABRASIVE CUTOFF MACHINE
cuts pipe, channels, angles, I-beams



Both pipe and tube, as well as structural shapes can be cut by this Roll-A-Round dry abrasive cut-machining unit. Machine is available in two sizes to cut up to 6 and 12-in. diameter pipe, or structural shapes that will fit into 6 or 12-in. circles. Other sizes can be made to order. Electrical power controlled through drum-type reversing switch makes rotation of cutting unit simple and positive. Speed of rotation of cutting head around work is selected by variable drive system. Made by **Wallace Supplies Mfg. Co.**, Dept. NED, 1304 Diversey Parkway, Chicago 14, Ill.

For more details circle NED-13 J7 on enclosed inquiry slip

Interchangeable-Blade X-acto® KNIVES

Knife handles and interchangeable blade shapes for every cutting job in the laboratory, office, drafting room, enginering department, and factory. Try-out order! $1.00 for knife handle and sample blade assortment. Catalog of complete line on request.

If you have any special requirements for cutting tools, call on us at once. Our half-century of specialized experience is at your disposal.

X-acto®

X-ACTO, INC., 48-416 Van Dam St. Long Island City 1, N. Y.

For more details circle NED-14 J7 on enclosed inquiry slip

IF YOU DO HIGH SPEED MILLING

You'll Need This Helpful NEW Catalog!

GIVES ALL THE FACTS ON MILLING WITH CURVED TOOTH CUTTERS

- Complete information on curved tooth milling cutters. How they increase production, save time, extend tool life and eliminate chatter.
- Helps you select the proper cutter for the job. Comprehensive charts and simple ordering data.
- Gives the complete line of Aber Curved Tooth Milling Cutters.
- Contains data sheet on how to sharpen curved tooth milling cutters . . . other helpful information.

ABER ENGINEERING WORKS WATERFORD, WISCONSIN

Write for **FREE Copy Today**

For more details circle NED-15 J7 on enclosed inquiry slip

Save time and money—

BROWNING ROLLER CHAIN DRIVES

. . . using Browning's famous interchangeable bushing system

For quality and economy, specify Browning's smooth running roller chain and precision sprockets with simplified split taper compression bushing. Browning's unbreakable bushing mounts quickly, easily—saves shop time, lowers costs. Also used in Browning couplings, paper pulleys, sheaves; standardizes plant on one-type bushing.

Send for FREE NEW CATALOG

52 pages of engineering data on Browning Roller Chain Drives. Ask for catalog CD-102.

Browning MANUFACTURING COMPANY MAYSVILLE, KENTUCKY

For more details circle NED-16 J7 on enclosed inquiry slip

CARTER GUIDE-LINE LIGHT

Save time and materials in cutting, sawing or similar operations. Specially focused light casts straight, hair-line shadow in perfect alignment with projected path of cut. Also available with baffle plate to cast white line for cutting dark materials. Prevents needless waste and speeds production—is particularly popular in any ripsaw operation. Costs only pennies per hour.

FOR: Cutting, Sawing, Shearing, Bending, Blanking

OF: Wood, Rubber, Metal, Plastic, Meat, Plywood

CARTER PRODUCTS COMPANY, Inc.
421 Wm. Alden Smith Bldg., 30 Ionia Ave., S.W., GRAND RAPIDS 2, MICH.

For more details circle NED-17 J7 on enclosed inquiry slip

CLOGGED SEWERS!
Remember the costly plumbing bill

Chicago, September 1st. Just introduced is a Free Booklet on machines which enable the Home Owner, Janitor or Factory Maintenance Man to Rod-it-himself.

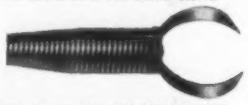
Yet anyone can operate this new Rodding Tool which is whirled down the drain in a few seconds. SINKS, BATHTUBS, TOILETS, URINALS, FLOOR DRAINS, HOUSE TO STREET SEWERS can be cleared of Rags, Grease, Paper, Sand, while cutter blades can be added for removing roots. A new discovery in Swedish Music Wire gives the rod 100% more Flexibility.

Another new unit is the Miller Electric Rodder which has patented cutters that expand automatically to the size of the pipe. It will clean out heavy obstructions in pipe diameters 2" to 12". Smaller sizes available. But now, what are these tools worth in COSTLY PLUMBING BILLS SAVED. Tear this ad out, fill in coupon and mail for FREE BOOKLET on Hand and Electric Units. Obey that urge. No agent will call. A postcard will do. Chicago phone: Kildare 5-1702.

ADVERTISED NATIONALLY

Electric Unit cleans pipes 2" to 12" 500 ft.

ATTACHABLE CUTTERS FOR HAND AND ELECTRIC UNITS



FOR HOME AND INDUSTRIAL USE

MILLER SEWER ROD, Dept. N.D., 4642 N. Central Ave., Chicago 30, Ill.

Please send FREE BOOKLET on Rodding. I am not obligated.

NAME .....

FIRM .....

STREET ..... CITY ..... STATE .....

▲ For more details circle NED-18 J7 on enclosed inquiry slip ▲

NEW SCREEN PROCESS PRINTER
Rapid–Simple–Economical

DECORATION AND IDENTIFICATION MARKING

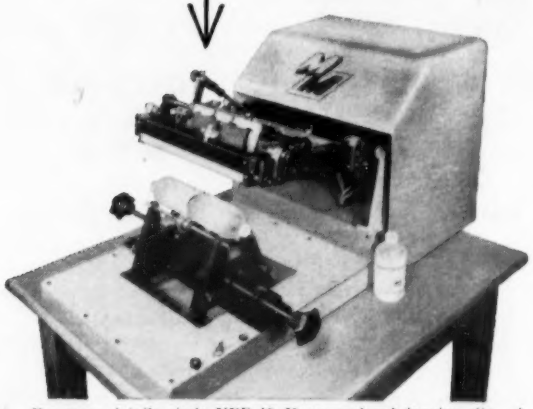
The Markem Model 90S power driven machine will imprint either flat objects such as instrument dials, printed circuits, novelties, flat bottles, leather and fabric shoe vamps; or round and cylindrical shapes such as lipstick cases, candles, basketballs, plastic bottles and cases.

Markem screen process provides heavy ink deposit with fine detail, and thorough, even coverage. Will imprint on almost any surface — variety of colors.

Write for Bulletin 90S.

MARKEM

Markem Machine Company
Keene 3, New Hampshire



▲ For more details circle NED-19 J7 on enclosed inquiry slip ▲

Made to order

HEAT TREATING BASKETS
FOR LARGE OR SMALL PARTS

also standard designs widely used for many types of parts

828–24" x 12" x 12"
821–8" dia. x 5" deep

Custom made or standard, there's no limit to the variety of heat treating baskets we manufacture—plain steel, stainless, or Monel. Sales engineers in principal cities assure prompt service. Write today for further information.

HOFFMAN PRODUCTS CO., Inc.
2588 W. Philadelphia St., York, Pa.

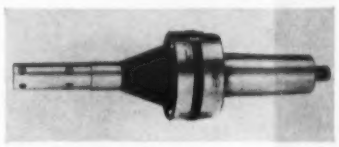
▲ For more details circle NED-20 J7 on enclosed inquiry slip ▲

TOGGLE SWITCH
sealed unit for 10-amp, 250-v load

Bushing of the No. 13 miniature toggle switch is sealed for panel mounting by means of a bonded silicone rubber diaphragm which withstands up to 240 psi. Rubber seal has been tested up to 150,000 cycles without leakage at 90 psi. The double-pole double-throw switch will withstand 100,000 cycles at a load of 10 amp at 250 v. Two-position device has a locking force of 500 grams between contacts. Size is 0.625 x 0.407 x 1.140 in. and weight is 16.4 grams. Made by **Krautter-Weber Tool Co.,** Switch Dept. 69-77 12th Ave., Newark 3, N. J.

▲ For more details circle NED-21 J7 on enclosed inquiry slip ▲

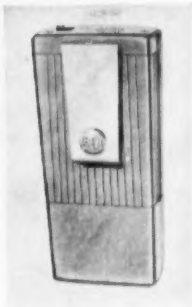
BORING HEAD
roughs and finishes in one operation



Both roughing and finishing are performed in one operation by the Deka - Bore boring head, designed for a specific boring operation. It is rigidly constructed so that the roughing tool in the front of the quill will remove stock from a cast hole, with the finishing tool following behind to finish the hole. Tolerance of 0.0003-in. is held. Radial adjustments to 0.0001-in. can be made without backlash. Tool can be used for boring in close quarters, as it can be made as short as 1½ in. Made by **Precision Tool Mfg. Co.,** Dept. NED, 1305 S. Laramie Ave., Cicero 50, Ill.

▲ For more details circle NED-22 J7 on enclosed inquiry slip ▲

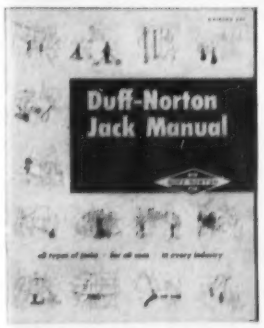
POCKET-SIZE RADIO RECEIVER
for mobile communication use



Fully transistorized, 10-oz pocket-size FM radio receiver is designed to provide extensions of several miles for radio systems operating in the 148-174 megacycle band for industrial communication purposes. Featuring printed circuitry, the double superheterodyne unit has its own antenna and loudspeaker and operates on self-contained flashlight-type mercury batteries. It can receive direct or relayed transmission from both fixed and mobile stations. Receiver is carried in the pocket in "on" position, enabling the carrier to hear all messages transmitted on its frequency. It can also be factory-adjusted for reception of any VHF channel in this band. Receiver measures 2¾ x 6½ x 1 in. Made by **Radio Corp. of America,** Communications Products Dept. NED, Bldg. 15-2, Camden 2, N. J.

▲ For more details circle NED-23 J7 on enclosed inquiry slip ▲

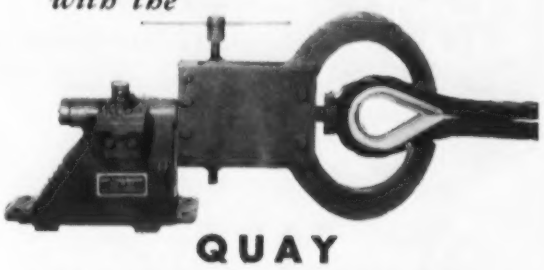
FREE MANUAL
describes over 300 Duff-Norton Jacks



Over 300 jacks are completely described in a 40-page brochure which will be sent free upon request. Rachet jacks, screw jacks, hydraulic jacks, and many special types are shown. In addition, a great deal of information is given on basic jack design principles, proper methods of selecting jacks for any job, proper care for jacks, and how to make the most efficient use of jacks. This most complete jacking manual is published by the world's largest and oldest manufacturer of lifting jacks. For your copy, write Duff-Norton Company, P. O. Box 1889, Pittsburgh 30, Pa., requesting Catalog 204-N.

▲ For more details circle NED-24 J7 on enclosed inquiry slip ▲

NEW *solution to your wire rope splicing problems with the*



QUAY "TORQUEMASTER"

- Tests confirm a savings of 50% in splicing man-hours with the TORQUEMASTER due to portability, simplicity and speed of operation resulting in the lowest possible cost per splice.
- Swivel Action Jaw Assembly rotates against the lay of the wire rope. Break prevents counter rotation.
- Now being used extensively by manufacturing, contracting, engineering, steel and wire rope industries. Also meets American and Foreign Armed Services specifications.
- Variety of combinations and sizes available to handle from 1/16" to 1½" wire rope.

FOR FURTHER INFORMATION WRITE:

QUAY INDUSTRIES 2135 Riverside Ave. Jacksonville 4, Florida

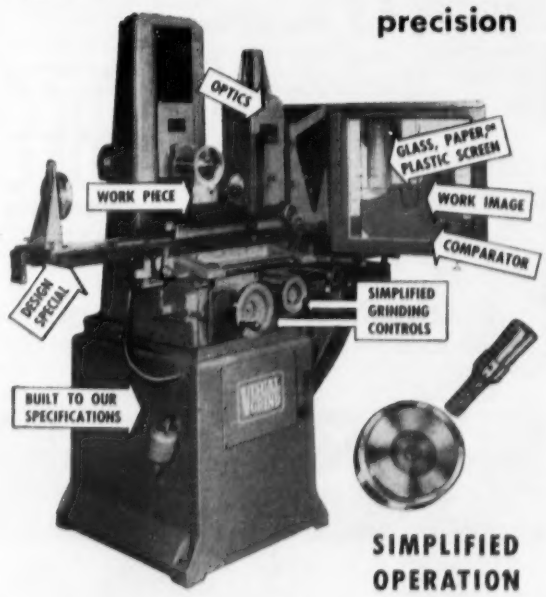
▲ For more details circle NED-25 J7 on enclosed inquiry slip ▲

TOP FIRMS SHOW

PROVED SAVINGS
UP TO 75% in Set-up and Grinding Time

VISUAL GRIND

with continuous work inspection and infinite precision



SIMPLIFIED OPERATION

When working with TUNGSTEN CARBIDE, STAINLESS STEEL, STELLITE or TOOL STEELS, VISUAL GRIND permits a semi-skilled operator to grind precision pieces without continued checking with the comparator. Automatic inspection is accomplished with the built in optical comparator.

Visit our plant . . . let us show you how VISUAL GRIND will speed production . . . cut costs.

Mail this Coupon NOW!

THE CLEVELAND GRINDING MACH. CO.
1740 Eddy Road Cleveland 12, Ohio

Gentlemen:

☐ Please have your representative call at our plant. The most convenient time would be

(week) .....

☐ Phone for appointment
☐ Please send us complete information on the new VISUAL GRIND.

NAME ..... TITLE .....

COMPANY .....

ADDRESS .....

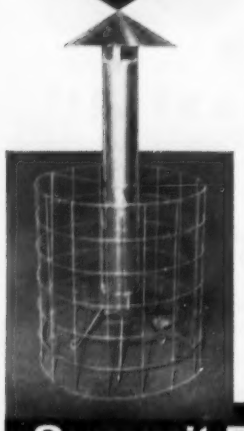
▲ For more details circle NED-26 J7 on enclosed inquiry slip ▲

Low Cost PLANT HEAT ... where you need it!

RADI-HEATOR

Gas-Fired Salamanders

For localized or supplementary heating



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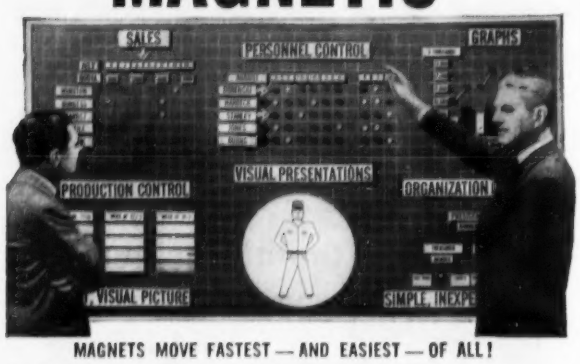

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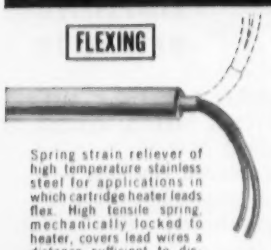

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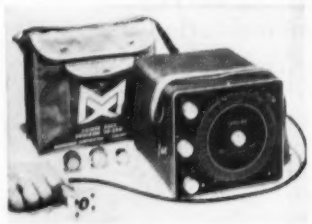
portable, battery-operated device also checks for laminar flaws



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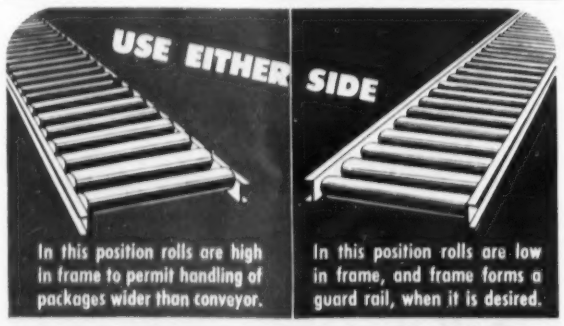

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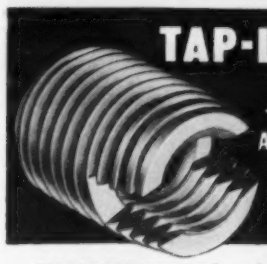

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J-7

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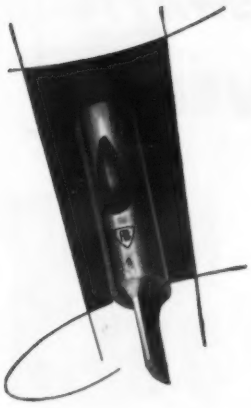

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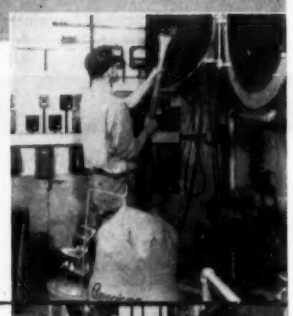

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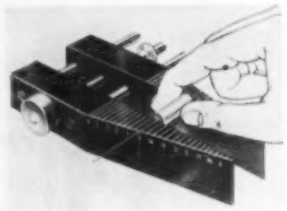
BENDING BLOCK
for electronic component leads



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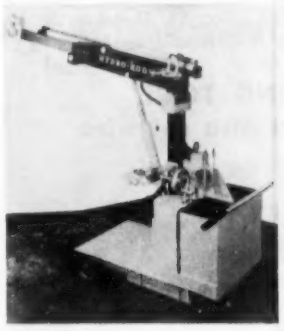
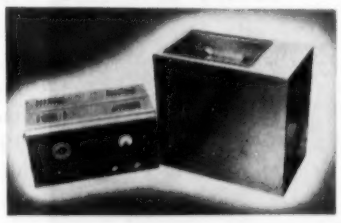
has accurate hydraulic boom action



Work loads are positioned accurately within 0.01-in. vertically and longitudinally with this Hydro-Boom truck. Hand operated screw controls crosswise movement, while boom elevation and extension are hydraulically actuated. Boom reaches up to 48 in. beyond the front of the truck. Capacity is 2500 lb with boom retracted and 1500 lb when fully extended. Trucks are available in hand operated and battery powered models, with or without power propulsion. Made by **Vanguard Engineering Co.**, Dept. NED-9, 1908 E. 66th St., Cleveland 3, O.

For more details circle NED-38 J7 on enclosed inquiry slip

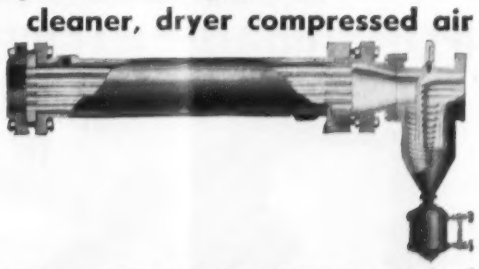
ULTRASONIC CLEANER
has self-contained filter system



Operating on a frequency of 40 to 44 kc and incorporating a forced air cooling system, the Glennite U-102 circulating ultrasonic cleaner has a cleaning tank capacity of 1 gal. Sudless detergents or chlorinated solvents are used. Circulating pump, permanent filter element, and an additional tank for recirculating the fluid eliminates need for manual tank draining and filtering the dirty fluid. Circulator operates automatically at conclusion of a predetermined cleaning period. Small parts, tools, or instruments can be cleaned. Made by **Gulton Industries, Inc.**, Vibro-Ceramics Div., 210 Durham Ave., Metuchen, N. J.

For more details circle NED-39 J7 on enclosed inquiry slip

Aftercooler and Cyclone Separator designed for cleaner, dryer compressed air



The Adams Aftercooler and Cyclone Separator are designed to efficiently condense and remove water from compressed air and process gas. Condensed moisture and entrained dirt and oil are subsequently removed in a cyclone type separator. This unit is scientifically designed for maximum removal efficiency over a wide range of flow rates.

For normal use, units are available to cool gases to within 10° F of the temperature of the cooling water. Specially designed units are available to permit a 2° F approach to cooling water temperature, for application where low moisture content is critical.

Adams Aftercoolers and Separators are available from stock to handle 20 - 40,000 cfm with 10° cooling and 25 - 19,200 cfm where it is necessary to cool within 2°F of the cooling water. Special units can be supplied to suit an unlimited range of requirements. In all cases the maximum pressure loss at rated capacities is ½ psi.

This wide range of sizes enables the economical utilization of Adams Aftercoolers and Separators in virtually all industrial application. For further information on how R. P. Adams' units will solve your compressed air problems and save you money, write today for Bulletin 711. R. P. Adams Co., Inc., 227 East Park Drive, Buffalo 17, New York. Advt.

For more details circle NED-40 J7 on enclosed inquiry slip

LW MILLING MACHINE VISES
DRILL PRESS—SHAPER

• Super-strong • Flange construction • All surfaces ground for extreme accuracy • Full length bearing on ground bar and machine ways • Steel jaws • Work holding surfaces are always at true right angles, or parallel to the table • Large Acme steel screw with replaceable bronze nut.

The *New* MOGUL	The *New* MASTER	The *New* JUNIOR
Jaws ⅝" thick, 8⅝" wide and 2½" deep open 6" when in place. Wt. 140 lbs.	Jaws ½" thick, 6½" wide and 2" deep open 4" when in place. Wt. 90 lbs.	Jaws ⅝" thick, 4½" wide and 1⅝" deep open 3¼" when in place. Wt. 40 lbs.
Only $180.00	Only $90.00	Only $60.00

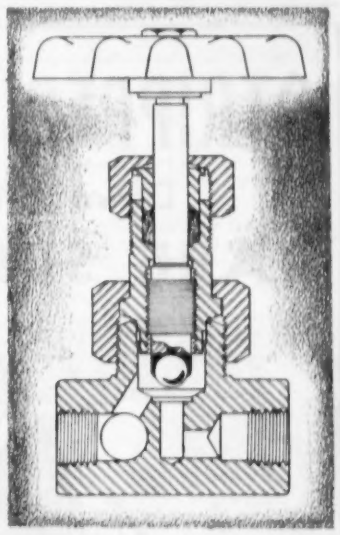
Can be purchased without the swivel base.
SEE YOUR INDUSTRIAL SUPPLY DISTRIBUTOR OR ORDER DIRECT, GIVING DISTRIBUTOR'S NAME

Send for complete catalog giving prices and specifications on these quality, low-cost L-W Products

L-W CHUCK COMPANY 51 SO. ST. CLAIR ST. TOLEDO 4, OHIO

For more details circle NED-41 J7 on enclosed inquiry slip

BALL VALVE
New Seating Surface every time valve closes



The Foxboro Ball Valve uses a retained, free-rolling stainless steel ball (instead of a disc or plug) that exposes a different seating surface every time you close it. Made of forged steel for heavy industrial liquid, gas, and steam flows. Can't leak . . . practically never wears out . . . costs little or no more than ordinary valves!

These valves handle pressures to 3000 psi. Available in globe and angle types. Two or four connections to simplify piping. ¼" general purpose size. Write for Bulletin 464. **The Foxboro Company, 669 Neponset Ave., Foxboro, Mass., U.S.A.**

FOXBORO INSTRUMENTATION
REG. U.S. PAT. OFF.

For more details circle NED-42 J7 on enclosed inquiry slip

BE READY FOR ACTION! WHEN FIRE STRIKES

The GARDWELL Fire Blanket Container is fast and easy to operate. Use it to smother fires or for first aid cases. Pull the release and the 66" x 84", 4 lb. woolen blanket slides out instantly. The container is painted a bright red and is designed for easy hanging. ASBESTOS BLANKETS ALSO AVAILABLE.

HOW TO ORDER

		Each
1940	—Container and Woolen Blanket	$17.50
1941	—Container and Asbestos Blanket	32.10
40	—66" x 84" Woolen Blanket	8.50
41	—66" x 80" Asbestos Blanket	23.45
19	—Container only	8.65
190DM	—Container—Outdoor Model	9.25

Dealerships Invited

GARDWELL
Safety CLOTHING & EQUIPMENT **Co.**
1990 EAST 69th ST. • CLEVELAND 3, OHIO

For more details circle NED-43 J7 on enclosed inquiry slip

SPEED UP SLOW-FLOW MATERIALS

RESINS • MOLASSES • OILS • GREASES
ADHESIVES • TARS • GUMS • OTHERS

NEW WRAP-IT-HEET
ELECTRIC DRUM HEATER

SAVES TIME...New Acrawatt Drum Heater quickly empties slow-flow materials from their drums. NEW spring-loaded toggle clamp for speedy on-off. Handy 3-heat selector switch. Use singly or in multiple.

Immediate delivery, order now—F.O.B. Franklin Park Ship. Wt. 10 lbs. **$29.50 each**

• 3 Heats: Hi, Lo, Med. (Models for 3000 W. 230 V. and 2500 W. 115 V.) • 5" heater band, aluminized steel • Spring-loaded toggle clamp • Long-life nickel chrome heating element

ACRA ELECTRIC CORPORATION
9907 Pacific Ave., Franklin Park, Ill.
GLadstone 5-4777
ELECTRIC HEATING ELEMENTS ACRAWATT "PRECISION IN HEAT"
7265

For more details circle NED-44 J7 on enclosed inquiry slip

STRIPPED CLEAN
Down to the
BARE SURFACE

Fastest "Stripper" In The Business

BLACK BEAUTY
BLAST GRIT

★ No silicosis health hazard — safe, clean and sure
★ Fastest cutting, sharpest material known
★ Longer lasting, reusable many times over
★ Moisture-free, no packing due to dampness
★ Leaves surfaces absolutely clean — no deposits
★ Gives highest degree of etch for better bonding

FREE Working Sample

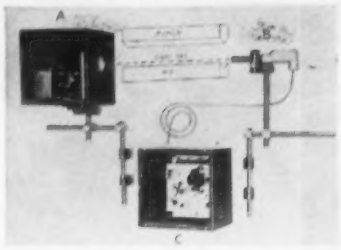
Up to 400 lbs. of this NEW product with diamond-like cutting qualities shipped to you FREE — no charge or obligation.

WRITE TODAY for technical brochure and envelope samples of many grades available for *any* degree of etch desired. Choose the grade you want for working sample and minimum quantities necessary for trial production run.

Manufactured and Distributed by
H. B. REED & CO., INC.
6618-D Kennedy Ave., Hammond, Ind.
H. B. REED CORP.
91-D Passaic St., Passaic, N. J.

For more details circle NED-45 J7 on enclosed inquiry slip

SHEAR & PRESS BRAKE GUARD makes use of photoelectric cell



Light projector (A), photocell receiver or pick-up (B), and amplifier (C) comprise this photoelectric type guard for metal cutting shears and press brakes. Series of holes in a disk rotating in front of the light projector produces high frequency light impulses that are picked up by a small cadmium selenide photo crystal and changed into electrical impulses. Any interruption of light from the tuned light source will operate the amplifier. It will halt any stop button-equipped machine anywhere in its cycle, will lock a clutch pull rod to prevent machine operation, or employ an air cylinder and air solenoid valve to pull a clutch rod. Made by **Searjeant Metal Products Inc.**, Box 54, Mendon, N. Y.

For more details circle NED-46 J7 on enclosed inquiry slip

TERMINAL ATTACHING TOOL installation pliers also cut wire

Self-insulated Sta-Kon terminals are readily attached to No. 10 to 22 wires with this WT-152 hand tool. It serves also as a wire cutter, and can be used in close quarters. Skinned wire is inserted in terminal, and latter is staked to form an insulated terminal. Cushion-grip handles assure a comfortable, slip-free grip. Made by **Thomas & Betts Co.**, 24 Butler St., Elizabeth 1, N. J.

For more details circle NED-47 J7 on enclosed inquiry slip

SURFACE ROUGHNESS TRACER rotary unit used with Profilometer

Surface roughness of concentric diameters on flat surfaces is measured by the type PE rotary table pilotor, developed for use with Profilometer surface roughness measuring devices. Typical applications are measurement of refrigerator seals and valve seats. During operation, the tracer remains stationary while the table carrying the part being measured rotates. Tracer height and tracing speed are adjustable, and the standard 3/8 to 2-in. radius can be extended. Other rotary pilotors for other applications are available. Made by **Micrometrical Mfg. Co.**, Dept. 9, 345 S. Main St., Ann Arbor, Mich.

For more details circle NED-48 J7 on enclosed inquiry slip

for inspection and fine assembly work
IPCO "FLUD-LITE" MAGNIFIER

Scientifically focused, shadow-free fluorescent light. Magnifies the work through a high quality 5" diameter lens. Bench model illustrated. Also made in hand model for portable use.

WRITE FOR BULLETIN NO. 58

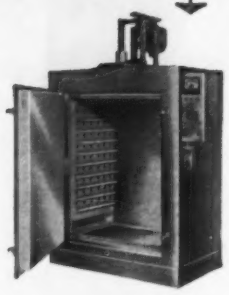
IPCO Safety Equipment for all Industries
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

For more details circle NED-49 J7 on enclosed inquiry slip

STRAIGHT LINE CONTROL
BLUE M'S *REVOLUTIONARY*
POWER-O-MATIC®
Patents Pending
INDUSTRIAL
BATCH OVENS

• OUTPERFORMS ALL OVENS *Guaranteed*
• 23.8% COST SAVINGS
• AUTOMATIC HEAT RECOVERY
• MULTIPLE FAIL-SAFE FEATURE

IMPROVED PRODUCTS
SUPERB PERFORMANCE



POWER-O-MATIC automatically proportions minimum wattage in relation to temperature and work load. Operator merely sets temperature. No auxiliary switches to set. Nothing to remember. Fully automatic. Faster.

Finest advancement of temperature control in 50 years. Equal to saturable core reactor control action—at much less cost.

• TEMP. RANGE 100° F. to 600° F.

COMPETITIVELY PRICED
Write for "The POWER-O-MATIC Story"
MODELS FROM 16 TO 96 CU. FT.

BLUE M ELECTRIC CO.
138th AND CHATHAM ST. BLUE ISLAND, ILL.
Manufacturer of ovens, furnaces and related temperature controlled equipment.

For more details circle NED-50 J7 on enclosed inquiry slip

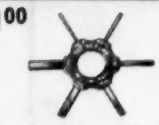
FOLD-UNI-KEY
7 HEX WRENCHES IN A SINGLE POCKET TOOL

$1.50

• No more hunting for lost wrenches
• End of wrenches beveled—slip easily into screws
• Wrenches snap into right angle position, but can be used at any angle

HEX-UNI-KEY

$1.00



Six most common socket screw wrenches in one durable holder. A good seller for years.

PHIL-UNI-DRIVE

$1.00

Four popular screwdrivers in one rugged unit with no loose pieces to assemble.

All Eklind tools have the best alloy steel and are hardened and tempered for maximum life. Each product is shipped in displays.

Eklind TRADE MARK
WRITE FOR LITERATURE

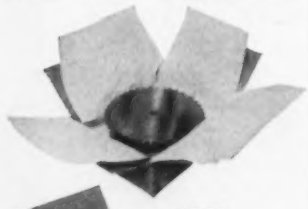
EKLIND TOOL & MFG. CO.
2629 North Western Avenue Chicago 47, Illinois

For more details circle NED-51 J7 on enclosed inquiry slip

RUST PROTECTION

COSTS LESS WITH marvellum VPI

SAVE TIME, LABOR AND MATERIALS



Superiority of Marvellum VPI is evident when you consider:
• No more corrosion rejects
• Easier and faster to use
• Lower packing costs
• Lower shipping costs
• No clean-up time

Rust-free storage up to ten years is possible with Marvellum VPI.

FREE
Informative brochure on VPI complete with wide range of samples. Write Dept. 11-A.

THE MARVELLUM COMPANY
HOLYOKE, MASSACHUSETTS

For more details circle NED-52 J7 on enclosed inquiry slip

EXPLOSION PROOF SOLENOIDS AND SOLENOID OPERATORS

FX-326 SOLENOID
FX-300 LINE
EXPLOSION PROOF
SOLENOIDS

R2DX-326
RDX-300 LINE

The FX-300 line of explosion proof solenoids ranges in pull from 3 lbs. to 100 lbs. at 85% voltage and from 4.2 lbs. to 140 lbs. at 100% voltage. Stroke range is from 1.25" to 5". We also produce the FX-400 and FX-800 explosion proof solenoids.

The RDX-300 line of explosion proof solenoid operators (reversing solenoids) is made from the F-300 line of solenoids and has the same range of pull and stroke as the FX-300 line of solenoids. The operators are made in the 2-point and 3-point types. We also produce the RDX-400 and RDX-800 lines of explosion proof operators.

See our catalog in Sweet's Catalog Service.

TROMBETTA SOLENOID CORP.
329 N. MILWAUKEE STREET • MILWAUKEE 2, WISCONSIN

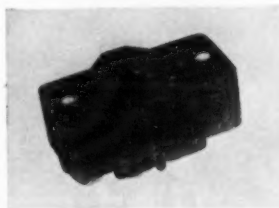
For more details circle NED-54 J7 on enclosed inquiry slip

SAFETY CRANE LINK
insulates against high voltage

Danger to hook tenders, riggers, and others resulting when a mobile crane contacts high voltage lines is eliminated with the insulated safety link. It will also isolate weldments from hoisting mechanism while suspended for electrical welding. Link has the same safe working load as hook it supports. Sizes with ½ to 25-ton capacities have dielectric strengths from 1 to 50 kv. Available from **E. D. Bullard Co.**, Dept. A, 2680 Bridgeway, Sausalito, Calif.

For more details circle NED-56 J7 on enclosed inquiry slip

SNAP-ACTION SWITCH
handles 2 hp, 230 v ac



Four different terminal and circuit arrangements which permit at least six circuit variations are offered in the Duo-Snap heavy-duty snap-action switch. Designed for machine tool service, switch is only 2 in. long. It will handle up to 2 hp at 230 v ac, 1 hp at 150 v ac, and for pilot duty, 20 amp, 250 v ac. Snap-action is achieved through rolling spring principle. Made by **Robertshaw-Fulton Controls Co.**, Acro Div., Columbus 16, Ohio.

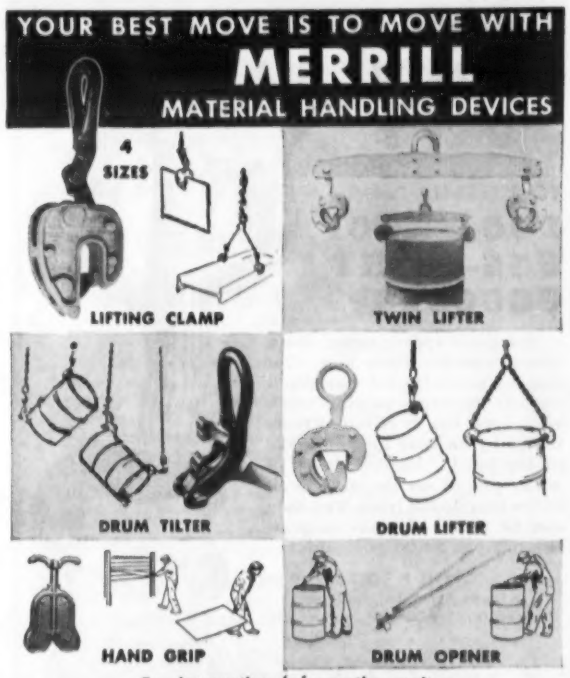
For more details circle NED-57 J7 on enclosed inquiry slip

MOBILE AIR CONDITIONER
¾-ton unit blows 300 cfm

Wheeled from area to area, this Dock-side portable air conditioner can be used to control temperatures in maintenance shops, tool rooms, or office areas, or to cool specific parts or equipment. Cool air flows from large coiled hoses which can be directed as desired. Unit employs the capillary system of Freon gas expansion. Fan unit can be operated independently of the hermetically sealed compressor. Unit is rated ¾ ton and will blow 300 cfm. Dehumidification rate is 2.12 pt per hour. Distributed by **Synco Co.**, Dept. N, United Artists Bldg., Detroit 16, Mich.

For more details circle NED-58 J7 on enclosed inquiry slip

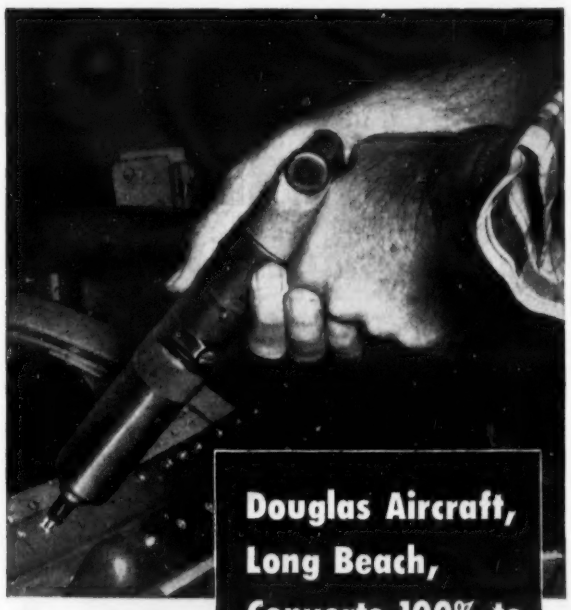
YOUR BEST MOVE IS TO MOVE WITH
MERRILL
MATERIAL HANDLING DEVICES



For Interesting Information write

MERRILL BROTHERS
56-13 Arnold Ave., Maspeth, N. Y.
3-R-5

For more details circle NED-60 J7 on enclosed inquiry slip



Douglas Aircraft, Long Beach, Converts 100% to Livermont Torque Limiter

Tests prove savings in bit breakage, labor costs, and screwhead damage!

the LIVERMONT LIMITER combines power driven speed . . . with hand torque accuracy!

DOUGLAS AIRCRAFT, INC., Long Beach, Calif., reports: ". . . The Livermont Limiter was subjected to every type of application in aircraft assembly, with very satisfactory results, to determine its potentiality. As a result, this Long Beach plant is converting 100% all air-powered screwdrivers. We have not had to repair or recalibrate a Livermont Limiter even though some have been in service for over a year running three shifts a day."

At Douglas, Livermont Limiters powered by Ingersoll-Rand air motors combine the speed of air powered tools with the accuracy of manually operated torque wrenches. Proven to be much faster than old methods, the Limiter maintains indefinitely, a positive accurate torque from 5 to 85 inch pounds without impacting or ratcheting.

NORTH AMERICAN: "An accuracy rating of 100 per cent was given the Livermont tool . . ."

NAVY: "Tested and evaluated, U.S. NAVAL AIR STATION, San Diego, Calif."

LOCKHEED: ". . . 1 man does the work of 5 . . ."

AIR FORCE: "Tested and evaluated at WRIGHT AIR DEVELOPMENT CENTER, Ohio."

RYAN: ". . . proved to be 10 times faster than former methods."

CONVAIR: ". . . reduces bit breakage from 100 per day to 10 in seven weeks."

HUNDREDS OF INDUSTRIAL USES The Livermont Torque Limiter will quickly pay for itself, whether or not accurate torque is essential, by reducing bit breakage and eliminating screw head damage. Designed and built for rugged shop use, the Livermont Limiter can be used with the delicacy and precision of a jeweler's screwdriver.

LIVERMONT, INC. MAPLE AND MYRTLE MONROVIA, CALIF.

AN AFFILIATE OF RICHMONT, INC., WORLD'S LARGEST PRODUCERS OF TORQUE WRENCHES, SCREWDRIVERS AND INSTRUMENTS.

For more details circle NED-55 J7 on enclosed inquiry slip

NOW Clean oil reservoirs and systems without stopping production—with Houghton's

GUM SOLVENT B

Stop frequent shutdowns, constant service calls, repeated part replacement. Eliminate expensive repairs, long lay-ups. Clean your oil system while it works, with Houghton's Gum Solvent "B".

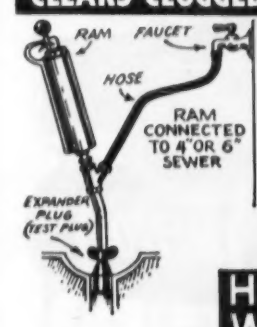
It cleans pumps, bearings, gear boxes, crankcases, pipe lines, control valves, cylinders and reservoirs. It removes oxidized oil, gummy deposits, water sludge, resins, contaminants. Just use up to 5 per cent of oil reservoir capacity, operate for 150 hours and drain.

Now used by hundreds of companies. Get full information from E. F. Houghton & Co., 303 West Lehigh Avenue, Philadelphia 33, Pa.

GUM SOLVENT B
. . . a product of
E. F. HOUGHTON & CO.
PHILADELPHIA · CHICAGO · DETROIT · SAN FRANCISCO
Ready to give you on-the-job service . . .

For more details circle NED-59 J7 on enclosed inquiry slip

CLEARS CLOGGED DRAINS in Seconds!



The ideal plumbing service tool. Can pay for itself in one application!

Smashes through the most stubborn blockages, then flushes clean — all in one operation!

Comes equipped with self-contained manual compressor (can charge Ram to 100 lbs. in 30 seconds!) and drain adaptors in 6 sizes!

HYDRAULIC WATER RAM

Anyone can operate it! Thousands already in use, have saved *millions* of dollars in industry and institutions. Why lose time, suffer inconvenience, waste dollars needlessly on either completely blocked or slow-moving sewers, drains, fixtures? The HYDRAULIC WATER RAM clears severest stoppages with SPLIT-SECOND HYDROSTATIC IMPACT! . . . Shatters blockage, then flushes clean. No snakes, chemicals, cables. No pushing through. Works perfectly, *vent or no vent!* Nothing to wear out. You risk nothing on our 30 day free trial offer, at our expense. Write for details.

Works perfectly with all clogged fixtures, toilets, sinks, urinals, etc. Equipped with 4" rubber cone, ideal for toilets, *plus* set of 5 tapered adaptor plugs for other drains or sewers.

Write for Information, Prices, Free Trial Offer — Today!
HYDRAULIC MANUFACTURING CO.
DEPT-NED-9 KIEL, WISCONSIN

For more details circle NED-61 J7 on enclosed inquiry slip

A wide variety of parts can be quickly produced from Synthane Laminated Plastics

One of the great advantages of Synthane laminated plastics is their ability to be readily machined.

You can saw, turn, mill, drill or punch them with ease. Many intricate parts can be produced by the molded-laminated and molded-macerated processes to save machining costs.

Industrial laminated plastics are our business and fabricating is our specialty. We may be able to save you time, material and delays.

SYNTHANE
SYNTHANE CORPORATION
N.E. River Rd., Oaks, Pa.

☐ Please send me information about Synthane Fabrication Service

NAME _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

For more details circle NED-62 J7 on enclosed inquiry slip

Eyes DUSTY, DRY?

YOU NEED . . .

FOG-PROOF, GAS-TIGHT GOGGLES

. . . for paint spray, gases, dusts, fumes, smoke. They hug your face so securely that hazardous outside elements cannot reach your eyes. Fog is removed from lenses by an easy nod or shake of the head. The few drops of water placed on the inner wall of the lens do the trick. Yes, they can be worn with any respirator. Sample, $2.00 postpaid.

H. S. COVER, P. O. Box 2508
South Bend 14, Indiana
"Respirators for Industry since 1894"

For more details circle NED-71 J7 on enclosed inquiry slip

Make overhead space contribute to plant earnings

CAPACITIES ½ TO 5 TON

CM METEOR WIRE ROPE ELECTRIC HOIST

• SINGLE AND TWO SPEED MODELS

METEORS offer real materials handling help in many ways. Read all about their unusual operating advantages in the METEOR CATALOG *sent on request.* Illustrates all details of suspension and construction. Prices included.

CM HOISTS AND CHAIN

CHISHOLM-MOORE HOIST DIVISION
COLUMBUS McKINNON CHAIN CORPORATION
TONAWANDA, NEW YORK
DISTRICT OFFICES: NEW YORK, CHICAGO, CLEVELAND
In Canada: McKinnon Columbus Chain Limited, St. Catharines, Ontario

For more details circle NED-72 J7 on enclosed inquiry slip

PLANNED PRECISION

In a bearing, PLANNED PRECISION is the carefully evaluated incorporation of whatever precision features are necessary to provide for the functional requirements of the job—not more, not less. Precision refinements are costly, and should be selected with care to insure products that are both economically and functionally correct.
NICE offers Product Designers a complete line of precision, semi-precision and unground ball bearings, both catalog standard and special.
Write for Catalog No. 190

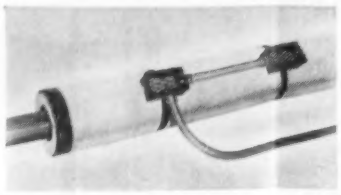
NICE is the word for BEARINGS

NICE

NICE BALL BEARING CO.
NICETOWN • PHILADELPHIA • PENNSYLVANIA

For more details circle NED-73 J7 on enclosed inquiry slip

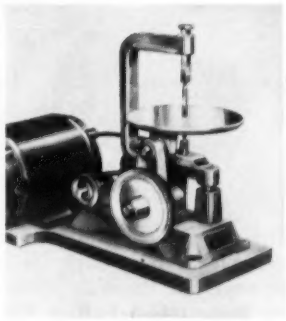
ELECTRIC HEATING ELEMENTS for tanks, tubes, or pipelines



Molded in strong, heat resistant, ceramic block to conform to contour of part or area to be heated. Thermoshell electric heating elements are especially suited for pipe, tube, or tank heating. They can be furnished to supply heat at temperatures up to 2000° F in any wattage or heat release ranging upward from 30 w (100 Btu) per sq in. Made in half-cylinder segments, elements are easily banded around pipe and covered with required amount and kind of insulation. They are made for diameters up to 12 in. and in lengths varying from 18 in. per unit. Made by **Cooley Electric Mfg. Corp.,** Dept. TS-B17, 50 S. Shelby St., Indianapolis 7, Ind.

For more details circle NED-74 J7 on enclosed inquiry slip

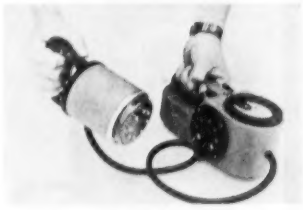
DIE FILE & SAW machine has tilting table



Standard 3½ or 4-in. parallel machine files as small as 3/64-in. diameter are used in this small size, bench type machine for filing and sawing small dies, jigs, and templets. It has a 6-in. diameter tilting table, 1-in. stroke, 3½-in. throat, and 1½-in. work thickness capacity. Yoke reciprocates at 375 strokes per minute, driven by a ¼-hp motor. Made by **High Speed Hammer Co.,** 315 Norton St., Rochester 21, N. Y.

For more details circle NED-75 J7 on enclosed inquiry slip

MOISTURE METER checks content of various materials



Measurement of moisture content in wood, paper, textiles, and other materials is function of the model 5 portable electronic moisture register. The lightweight, battery powered unit operates on principle of radio frequency power absorption and features a self-checking standard for field maintenance. An aluminum shell and miniaturized electronic components contribute to strength and compactness. Short gun with grip type handle is easily manipulated. Polystyrene electrodes are metal reinforced. Made by **Moisture Register Co.,** Dept. NED, Box 910, Alhambra, Calif.

For more details circle NED-76 J7 on enclosed inquiry slip

Buschman

BUSH-LOCK

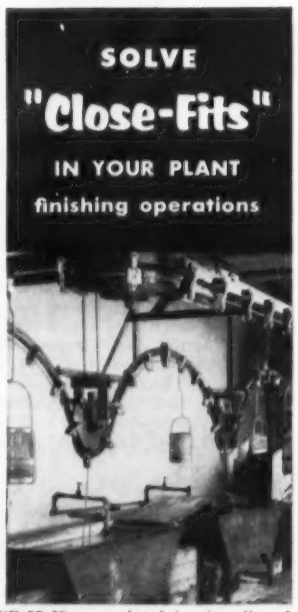
Cable Conveyor Components

Mechanized treating and finishing in just 27 ft. by 5 ft. of floor space—another space saving application of a versatile Bush-Lock Cable Conveyor, the low-cost package of standard stock components.

Sharp turns (from 7½" R)—plus the shortest possible dip in the industry for trolley type conveyors—eliminate space-waste and increase plant capacity in every type of industry.

Buschman specialists will cooperate with finishing equipment manufacturers making a survey of your plant requirements.

C-339-EWB

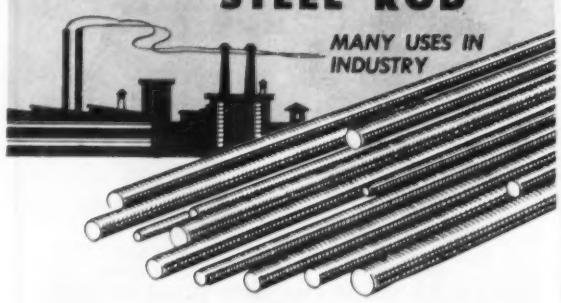


PRODUCE MORE FOR LESS
the Buschman CONVEYORS

THE E. W. BUSCHMAN CO.
4482 Clifton Ave.
Cincinnati 32, Ohio

For more details circle NED-77 J7 on enclosed inquiry slip

INSIST ON SINTZ COLD ROLLED THREADED STEEL ROD



ORDER FROM YOUR MILL SUPPLY HOUSE—INDUSTRIAL JOBBER OR DIRECT FROM

SINTZ • CRF threaded steel and non ferrous rod • COLD ROLLED THREADED—BENDS COLD • QUALITY • SERVICE • PRICE Established 1912

CLAUDE SINTZ INC.
1928 STANLEY AVENUE
DETROIT 8, MICH.

STUDS • FORMED RODS
PIPE PLUGS

For more details circle NED-78 J7 on enclosed inquiry slip

If you CUT any of these shapes in metal, WALLACE and only WALLACE can give you such a wide choice of machines.

21 sizes or types of cutting machines.

Do you get results as good as this with abrasive cutting?

This cleanly finished cut with the "machine-like" end was made in only 2½ seconds (3" O.D. x .065 Wall Stainless Steel Tube.)

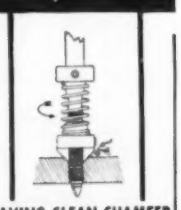
FREE! Ask for it—
44 page book
Wallace Cut-Machining Units.

WALLACE SUPPLIES MFG. CO.
Builders of Quality Machinery Since 1896
1308-12 Diversey Pkwy. • Chicago 14, Ill.
Engineers • Manufacturers • Consultants

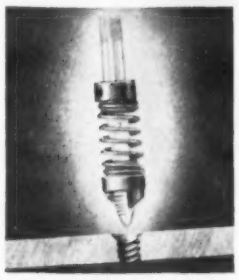
For more details circle NED-79 J7 on enclosed inquiry slip

TAP AND DEBURR IN ONE OPERATION

Slip a BURR-BIT onto any make tap and holes are automatically deburred while they are being tapped. Save money, time and labor by COMBINING TWO OPERATIONS INTO ONE.



AS TAP IS WITHDRAWN, BURR-BIT DEBURRS, LEAVING CLEAN CHAMFER



First thread which creates burr, has been AUTOMATICALLY, QUICKLY AND PRECISELY REMOVED, leaving perfectly smooth finish for easy screw insertion.

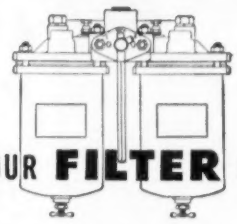
Precisely engineered of finest quality high speed tool steel for use on almost every material. The BURR-BIT is used by many large and small manufacturers throughout the country.

For full information and specifications on the BURR-BIT, write to

VERNON DEVICES, Inc.

481 E. 3rd Street Mt. Vernon, N.Y. MOunt Vernon 4-1686

For more details circle NED-80 J7 on enclosed inquiry slip



WHAT IS YOUR FILTER PROBLEM?

Coolants on lathes and grinders	Hydraulics	Fuels
Paints, varnishes and lacquers	Toothpastes	Waxes
Sugar, confections and syrups	Cup greases	Drugs
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Purolator's comprehensive Filter Catalog will give you valuable technical assistance in a wide range of liquid and semiliquid filtering applications. Send for your free copy. Or submit your particular filter problem to the designing and manufacturing experience of the oldest filter manufacturer in the United States. No obligation, of course.

Filtration For Every Known Fluid

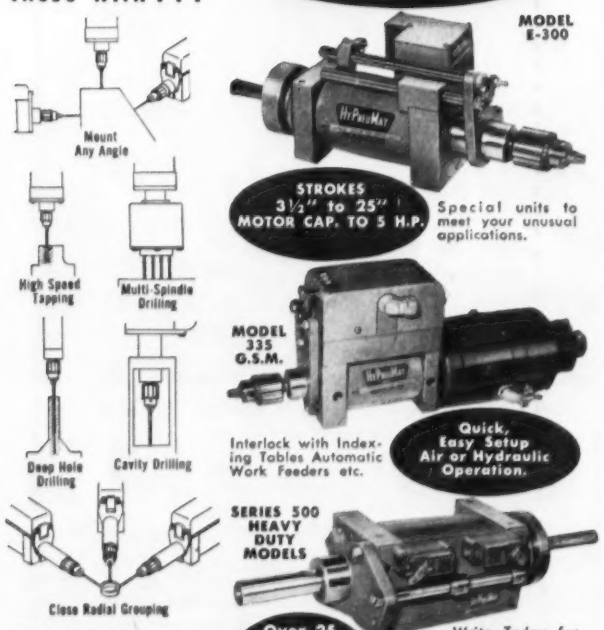
PUROLATOR PRODUCTS, INC.

Rahway, New Jersey and Toronto, Ontario, Canada

For more details circle NED-81 J7 on enclosed inquiry slip

Short Cut operations like these with . . .

HYPNEUMAT *Automatic* DRILLING AND TAPPING UNITS



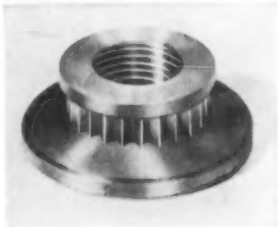
Write Today for FREE literature showing units and circuits.

Write Today for FREE literature showing units and circuits.

HYPNEUMAT, INC. 647 W. Virginia Street, Milwaukee, Wis.

For more details circle NED-82 J7 on enclosed inquiry slip

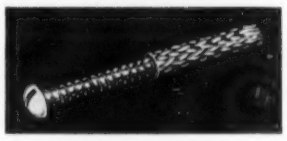
STAKED FASTENER provides threads in thin material



Load bearing threads in thin, free-flowing sheet material such as aluminum, brass, panel steels, and copper are provided by the type M staked fastener. Maximum strength shoulder type is offered for panels from 0.031 to 0.250 in. thick and space economy flush type for panels from 0.064 to 0.250 in. thick. Gripping strength is derived from cold flow of panel material into the recessed, knurled grooves of the fastener during installation by standard presses which are adjustable in pressure and stroke. Company's engineering service offers torque and pull-out test data for each application. Made by **My-T-Grip Mfg. Co.**, Dept. N, 176 Broadway, New York 38, N. Y.

For more details circle NED-83 J7 on enclosed inquiry slip

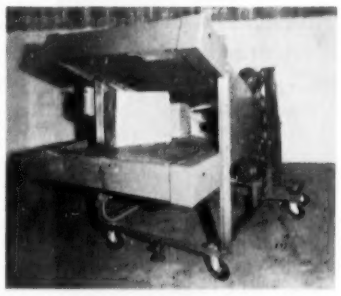
MASONRY SCREW ANCHORS now feature lead core



Improved Rawlplug masonry screw anchors have a core of Rawloy lead alloy which provides lubrication for the screw and prevents jute fibers from being cut by screw threads. Anchors can be used in any material and will absorb continuous shock and vibration. Various sizes are offered. Made by **Rawlplug Co.**, Dept. ND, 212 Petersville Rd., New Rochelle, N. Y.

For more details circle NED-84 J7 on enclosed inquiry slip

CARTON & BOX SHREDDER facilitates baling operations



Paper boxes, corrugated containers, and other forms of heavy paper are collapsed and shredded for convenient baling or disposal by this Silver 40A shredder. It crushes and shreds setup boxes and cartons without preliminary preparation. Shredded material can be fed directly to a baler or carried away by pneumatic or other conveyor system. Machine is mounted on casters with floor brakes for convenience of operation. Wide conveyor belt carries boxes into machine. Knives are driven by 15-hp 220/440-v 60-cycle motor. Made by **Industrial Shredder & Cutter Co.**, Dept. 1-N, 702 S. Ellsworth St., Salem, O.

For more details circle NED-85 J7 on enclosed inquiry slip

New Vacuum Pumping Savings

NRC Rotary Gas Ballast Pump Model 100M. Other units with capacities from 1¼ to 400 CFM; blank-offs down to 5×10^{-5} mm. Hg.

are reported by users of NRC Rotary Gas Ballast Mechanical Vacuum Pumps. These pumps maintain their original high efficiency even when handling water and other condensable vapors. They have proved in thousands of installations that they save money three ways:

1. **Lower First Cost**—because no oil reclaiming equipment is needed.
2. **Lower Operating Cost**—because cycles are shortened by ability of pumps to maintain top speed throughout cycle after cycle.
3. **Lower Maintenance Cost**—because labor and material costs for frequent oil changes are avoided.

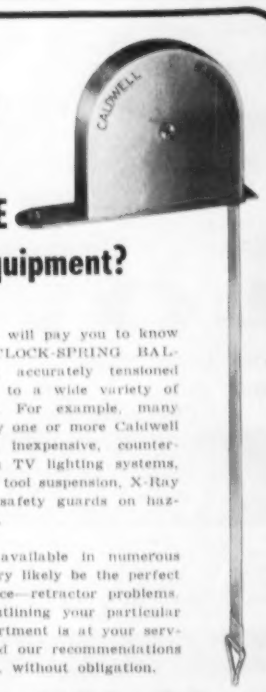
Send today for 16 page Bulletin 29-J.

NRC EQUIPMENT CORPORATION

SUBSIDIARY OF NATIONAL RESEARCH CORPORATION
DEPT 29, CHARLEMONT ST., NEWTON HIGHLANDS, MASS.

For more details circle NED-86 J7 on enclosed inquiry slip

Would a better RETRACTOR or COUNTERBALANCE improve your equipment?



If this possibility exists, it will pay you to know more about CALDWELL CLOCK-SPRING BALANCES. These dependable, accurately tensioned balances have been adapted to a wide variety of uses with complete success. For example, many photographic enlargers employ one or more Caldwell Balances for efficient, yet inexpensive, counterbalancing. Other uses are in TV lighting systems, vertical and horizontal doors, tool suspension, X-Ray equipment, and in operator safety guards on hazardous tools and equipment.

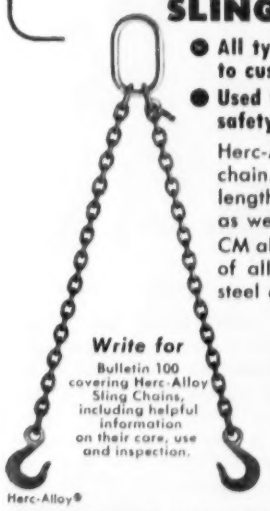
The Caldwell Balance is available in numerous types and sizes, and may very likely be the perfect answer to your counterbalance—retractor problems. Why not write us today, outlining your particular needs—our Engineering Department is at your service. Descriptive literature and our recommendations will be sent to you promptly, without obligation.

CALDWELL MFG. CO.

80 Commercial Street, Rochester 14, N. Y.

For more details circle NED-87 J7 on enclosed inquiry slip

HERC-ALLOY SLING CHAINS



- All types and sizes assembled to customers' specifications.
- Used throughout industry where safety is paramount.

Herc-Alloy is the original alloy chain. It is available in running lengths and special assemblies as well as slings.

CM also produces welded chain of all types including stainless steel and bronze.

Write for Bulletin 100 covering Herc-Alloy Sling Chains, including helpful information on their care, use and inspection.

Herc-Alloy®

COLUMBUS McKINNON CHAIN CORPORATION

TONAWANDA, NEW YORK

District Offices: NEW YORK • CHICAGO • CLEVELAND

In Canada: McKINNON COLUMBUS CHAIN LIMITED, ST. CATHARINES, ONTARIO

For more details circle NED-88 J7 on enclosed inquiry slip

STOP! INJURIES AND WORK INTERRUPTIONS *from falling fluorescent-tube accidents*

Fluorescent tubes sometimes fracture. Vibration and shock may release them from fixtures. Wherever fluorescent lighting is installed there is the possibility of physical injury and property damage resulting from falling tubes.

Don't wait for accidents to happen. For a few cents each you can keep tubes in place, prevent falling, insure against poisoning, contamination and spoilage, avoid injuries, work interruptions and loss of time.

Install Den-El fluorescent lamp guards, easily and quickly, with a screw driver. Permanent, positive protection. Stainless steel. Easily sprung aside for relamping or cleaning. Two guards for each lamp.

Types for all fixtures, also tubes in series

For 40W tubes, per C **$19.00**

For 100W tubes, per C **$22.50**

ORDER TODAY DIRECT

Ask for bulletin, also complete General Scientific catalog of hundreds of other safety equipment items

All orders shipped promptly from Philadelphia

GENERAL SCIENTIFIC EQUIPMENT CO.

7518 LIMEKILN PIKE, PHILADELPHIA 50, PA.

SAFETY EQUIPMENT FOR EVERY HAZARD

For more details circle NED-89 J7 on enclosed inquiry slip

another cost-saving GRC die cast zinc alloy fastener

NEW

PRICED LOWER

yet they have all the advantages of

GRC design • GRC mass production techniques
GRC uniformity • GRC bright finish

the new GRC "ECONOMY" WING NUT

Die cast in one piece in rustproof, corrosion-resistant zinc alloy.

Stocked in 15 different thread sizes from 6-32 to ⅜-16 in standard as well as new washer base and new "capped" type . . . 4 blank sizes . . . wing spreads from ¾" to 1⅛".

cost? as little as $3.50 per M

Write, wire, phone for detailed specification sheets and price lists.

Ask about GRC's other wing nuts —juniors, seniors, serrated-based; specials in high, low and round wing styles —other threaded fasteners—cap nuts, round head thumb nuts and screws, rivets— most economical!

GRIES

GRIES REPRODUCER CORP.

World's Foremost Producer of Small Die Castings

143 Beechwood Avenue, New Rochelle, N. Y. • NEw Rochelle 3-8600

▲ For more details circle NED-90 J7 on enclosed inquiry slip ▲

ELLISCO

BRUSH TOP CANS

HAVE MANY ADVANTAGES

. . . MANY USES!

Inexpensive HO Style: Screw cap has applicator brush riveted in cap. Capacity: 2 oz. to 1 qt.

D-Style: has high grade, bristle brush soldered in cap. Ring or detachable wood handle. Capacity: 3 oz. to 1 qt.

Use convenient, leakproof ELLISCO BRUSH TOP CANS for paints, pipe "dope", red lead, layout blue and your own products. Your servicemen, maintenance men, salesmen and customers will like these cans because they: SAVE TIME — brush fastened to can lid makes application easy; PREVENT WASTE — brush size is ideal for applying small quantities of liquids; INCREASE EFFICIENCY — they are easy to carry and always ready to use.

Write, wire or call for information and prices.

BAldwin 3-3405

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GEORGE D. ELLIS & SONS, INC.
4008 N. AMERICAN ST.
PHILADELPHIA 40, PA.

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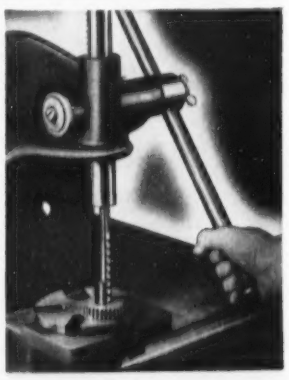
CUT KEYWAYS in ONE minute for ONE cent with the Minute Man KEYWAY BROACH KIT



Using an arbor press you can cut keyways for as little as a penny a piece in just one minute with the Minute Man Keyway Broach Kit. For keyways from 1/16" to 1" in any bore from ¼" to 3". Minute Man Broaches for square and hexagonal holes and Production Type Keyway Broaches are also available from stock from your Industrial Distributor.

SEND FOR CATALOG and PRICE LIST

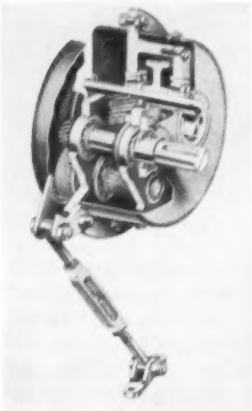
The duMONT CORP., Greenfield, Mass.

MAIL FREE BROACH CATALOG AND PRICE LIST Ddescribing Square Broaches, Hexagon Broaches, Production Type Keyway Broaches and Keyway Broach Kits to

Name.....
Company.....
Address.....

▲ For more details circle NED-92 J7 on enclosed inquiry slip ▲

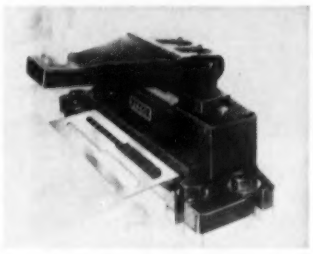
SHAFT-MOUNTED DRIVE
offered in 20:1 and 24:1 ratios



Added to line of double-reduction shaft - mounted drives are units with ratios of 20:1 and 24:1, both with the same outside dimensions and torque ratings. Offered in line with 4:1 and 14:1 reductions, the higher ratio units permit use of smaller sheaves to obtain a given speed output and, with lower output speed, use of a 1750-rpm motor. Drives in line are available for horizontal and vertical application, in ½ to 40-hp ranges, with output speeds as low as 5 rpm. Made by **Falk Corp.**, Dept. 255, 3001 W. Canal St., Milwaukee 1, Wis.

▲ For more details circle NED-93 J7 on enclosed inquiry slip ▲

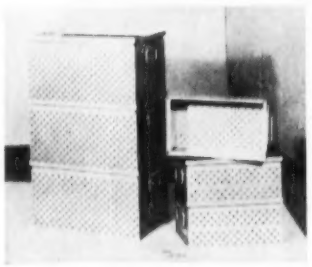
SCRAP CHOPPER
cuts 1/8-in. steel, 12 in. wide



Powered directly by the press ram, this heavy duty 12-in. scrap chopper operates independently of the die. Scrap falls automatically into a container. Easily installed, this device fits any punch press and handles any coiled ribbon stock. Blades are readily removed for grinding, and use of spare blades practically eliminates down time. Made by **Jaco Devices, Inc.**, 95 High St., Hingham, Mass.

▲ For more details circle NED-94 J7 on enclosed inquiry slip ▲

PERFORATED BINS & BOXES
stack for easy materials handling



Perforated Stackboxes and Stackbins for parts handling also serve as containers for vapor or liquid degreasing, quenching, and similar dipping and cleansing operations. They can be interstacked with standard Stackbins and Stackboxes or used in regular Stackracks. Four sizes range from 7½ x 13 x 6 in. to 15 x 19¼ x 11 in., width, length, and height, respectively. Perforations ranging from 7/32 and ⅛ in. on 1-in. centers to ½-in. centers are on bottom and sides, and are optional on ends. Made by **Stackbin Corp.**, 1081 Main St., Pawtucket, R. I.

▲ For more details circle NED-95 J7 on enclosed inquiry slip ▲

FAMOUS Palley CATALOG JUST OFF THE PRESS

396 PAGES PACKED WITH BARGAINS

ALL NEW 1957 CATALOG... GREATER THAN EVER BEFORE FULLY ILLUSTRATED

THOUSANDS UPON THOUSANDS OF INDUSTRIAL, COMMERCIAL AND CONSUMER ITEMS AT GREATER SAVINGS THAN EVER BEFORE! New Merchandise! Top Quality GOV'T SURPLUS!

Industrial & Building Supplies – Electrical Equipment – Motors, Generators, Portable Power Plants, Hand & Power Tools, Hardware, Fans & Blowers, Heating & Ventilating Equipment, Office Equipment to list but a few PLUS the GREATEST SELECTION of HYDRAULIC SUPPLIES we have EVER ASSEMBLED. Cylinders, Pumps, Valves, Motors, Fittings, Hose, etc., in genuine Gov't Surplus as well as our own high quality, custom made line. Its all in this amazing catalog!

ORDER YOUR COPY TODAY!

SAVE 2500LB. LIFT HOIST

Ideal for use in garage, shop, boat yard, farm, on trucks, etc. Has bronze, worm gear drive with 24 to 1 gear ratio and 3-speed crank. Comes with 18 feet of 3/16" high tensile strength, steel cable and free-spool, pull-out clutch. 34.95

MOUNTING FRAME – for above Hoist . . . 4.50

NOTE: We carry a complete line of hoists from small portables to huge, heavy duty types. Write for details.

NEW HYDRAULIC PRESS CYLINDERS

Specially designed for press work. Sturdy tie-rod construction. Operates at 3000 PSI. Has 2-1/2" shaft.

Part No.	Bore	Stroke	Length	Price Each
P5-6-30	5"	6"	10½"	$ 89.50
P5-8-30	5"	8"	14½"	105.00
P6-6-30	6"	6"	10½"	107.50
P6-8-30	6"	8"	14½"	127.50

The 5" diameter cylinders above will develop up to 30 TONS THRUST at 3000 PSI. The 6" diameter cylinders up to 43 TONS. Check others in our stocks.

UNIVERSAL JOINTS

Has a heavy duty, solid cast Bronze body. Rotates from 90° to 180° as desired. Has 29/32" diameter steel shafts with a ball and socket joint. In excellent condition. Ready-to-use!!! 5.95

Write TODAY for complete list of many other types of universal joints, hoists, hydraulics, etc.

SPECIAL 180° OFFSET DRIVE

For use where tremendous power at a low take-off RPM is desired. Has 6 gears rotating on self-lubricating, hi-speed roller bearings. 85 to 1 gear ratio. Shafts are 1-1/4" and 3/8" diameter.

USED in good condition ONLY 5.95
NEW in excellent condition . . . NOW 8.95

SAVE ON STEEL CABLE

ALLOY STEEL — Finest quality Alloy Steel cable. Rust & corrosion resistant.

7 x 7 STRAND Size	Price per ft.
1/16"	5¢
3/32"	6½¢
7 x 19 STRAND	
1/8"	9½¢
5/32"	10¢
3/16"	12½¢
1/4"	13½¢
5/32"	16½¢

STAINLESS STEEL — Aircraft Quality. Rust & Corrosion Proof. You can not beat this Bargain.

7 x 19 STRAND Size	Price per ft.
1/16"	7¢
3/32"	14¢
5/32"	21¢
3/16"	23¢
7/32"	29¢
1/4"	38¢
5/16"	47¢

SAVE ON NEW NYLON ROPE

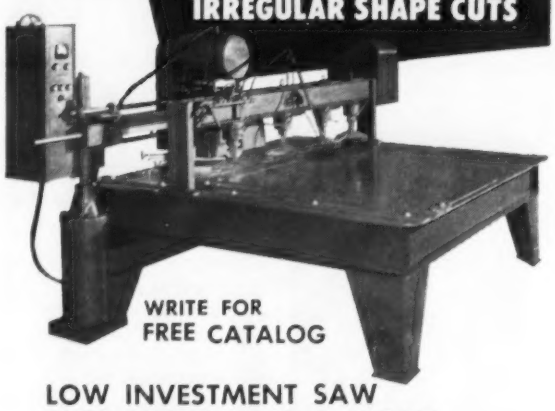
Very Finest Nylon Rope. Top Quality. Available in Sizes of 1/8" to 1" diam. Prices as low as 5¢ per running foot.

Palley's 2263 E. Vernon Ave. Dept. NED-99 Los Angeles 58, Cal.

Order From This Ad. Pay by M.O. or check. F.O.'s accptd. from D&B firms. ½ deposit with C.O.D.'s. All Prices FOB Los Angeles.

▲ For more details circle NED-96 J7 on enclosed inquiry slip ▲

HIGH-SPEED SAW WITH CLAMP TABLE MAKES IRREGULAR SHAPE CUTS



WRITE FOR FREE CATALOG

LOW INVESTMENT SAW CUTS METAL FAST & CLEAN

Whether you're making straight cuts, odd angle cuts or irregular shapes such as turbine impeller blades, you'll find the Ty-Sa-Man 144 BD combination of speed and amazing accuracy will save you money. Table has positive air-driven clamps to hold material in any position. Other Ty-Sa-Man cut-off models from 10" to 58" cuts . . . long-cut saws for 4' to 60' cuts, with or without cross movement, for friction or abrasive sawing.

Ty-Sa-Man MACHINE COMPANY
550 WHITE AVE., KNOXVILLE, TENNESSEE

▲ For more details circle NED-97 J7 on enclosed inquiry slip ▲

AMERICAN MONORAIL teams with Udylite plates auto bumpers at Rheem Automotive plant

Combined engineering skills resulted in substantially reduced handling costs for the plating of auto bumpers at the new Rheem Automotive plant at Fullerton, California. 32 American MonoRail automatic dispatch units move special Udylite bumper carriers on three monorail systems with 14 drop sections to maintain continuous automatic plating.

Let American MonoRail engineers solve your handling problems.

Write for Bulletin C-1

THE AMERICAN MONORAIL CO.
13116 ATHENS AVENUE • CLEVELAND 7, OHIO
(IN CANADA—CANADIAN MONORAIL CO., LTD., GALT, ONT.)

▲ For more details circle NED-98 J7 on enclosed inquiry slip ▲

1 man does the job of 3

BRITEWAY CLEANER-SANITIZER
. . . cleans
disinfects
deodorizes

Cuts your labor costs by 50% IN 1 STEP

In the same operation, Briteway removes dirt, kills bacteria, banishes offensive odors... Takes only one cup to pail of water to make abundant suds... Works in hard water... Leaves refreshing aroma (no "disinfectant" smell)... Applied with mop on floors; sponge, cloth or brush on toilet seats, tile, walls... Priced below competing products which do not compare... For information write Dolge.

For free sanitary survey of your premises ask your Dolge service man

Dependable DOLGE WESTPORT, CONNECTICUT

▲ For more details circle NED-99 J7 on enclosed inquiry slip ▲

DELAVAN

Spray Nozzles

for Industrial use

You'll find the nozzle to meet your specific requirements in the complete selection offered by Delavan, one of the world's leading producers of high-quality precision nozzles.

Write for Catalog 32 for complete details and specifications.

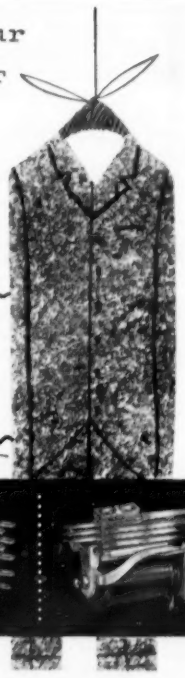
DELAVAN *Manufacturing Co.*

WEST DES MOINES, IOWA

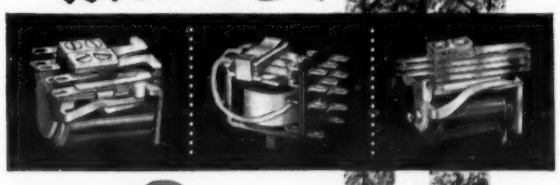
▲ For more details circle NED-100 J7 on enclosed inquiry slip ▲

RELAYS are our LONG SUIT

For years, we've been custom-making relays to fit a wide range of applications. Manufacturers everywhere patronize our shop. They say we suit them to a "T". Our master craftsmen are ready to create a relay that will suit you, too.



Custom-Tailored
to your requirements
. . . for better fit
. . . for longer wear



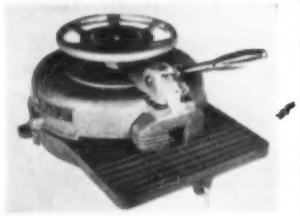
Inquiries Invited

Comar ELECTRIC COMPANY
3349 ADDISON ST., CHICAGO 18, ILLINOIS

RELAYS • SOLENOIDS • COILS • SWITCHES • HERMETIC SEALING

▲ For more details circle NED-101 J7 on enclosed inquiry slip ▲

STENCIL CUTTING MACHINE
cuts 3/8-in. letters in oil board



Added to Speedmodel line of stencil cutting machines is this unit which will cut 3/8-in. characters in oil board. Machine will cut seven lines, 38 characters to the foot, any length. It features lightweight "almag" internal castings, high carbon punches and dies, and ball bearing construction. Made by **Diagraph-Bradley Industries, Inc.**, A A Div., Box 269 Herrin, Ill.

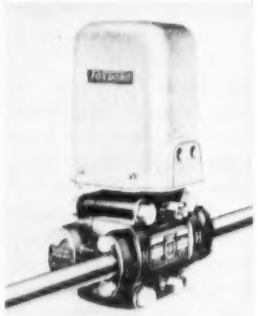
▲ For more details circle NED-103 J7 on enclosed inquiry slip ▲

VACUUM CLEANER
wet-dry type in 5 and 8-gal sizes

Powered by a 3/4-hp bypass, moistureproof motor, this Hydro-Jet Kangaroo vacuum cleaner will pick up either wet or dry materials. Model SJ-108 will recover 8 gal, whereas model SJ-105 has a 5-gal recovery capacity. Both sizes have large rear wheels and tubular handle. Tool storage compartment is built into front of tank. Attachments are available for wet or dry floor and carpet cleaning, as well as other general cleaning and maintenance operations. Made by **Advance Floor Machine Co.**, 4102-E Washington Ave. N., Minneapolis 12, Minn.

▲ For more details circle NED-104 J7 on enclosed inquiry slip ▲

SMALL-FLOW METER
for liquid, air and other gases



Flows with a minimum range of 0.003 to 0.01-gpm of clean water and from 0.01 to 0.04 cfm of air and other gases are measured and transmitted by this integral orifice d/p Cell Transmitter. It is designed for research and pilot plant uses as well as for such process operations as ratioing small flows. Simple means is provided for installing any one of six orifices with bores ranging from 0.02 to 0.05-in. Conversion kit containing set of orifices and manifold is available for changing type 13A transmitters in the field to measure small flows. Maximum working pressure is 1500 psi and temperature is 250° F. Made by **Foxboro Co.**, 26 Neponset Ave., Foxboro, Mass.

▲ For more details circle NED-105 J7 on enclosed inquiry slip ▲

AURAND

CLEANING TOOLS
ELECTRIC OR PNEUMATIC

Zip away **SCALE RUST PAINT**

Powerful rotary chipping action completely removes stubborn accumulations from iron, steel, brick, concrete, etc. with less effort. Adjustable depth shoe for controlling depth of cut. Renewable cutter heads. Two sizes in both electric and pneumatic models. Lightweight.

Write Dept. 14 for the money-saving facts.

AURAND MFG. & EQUIP. CO.
1210 Ellis St. • Cincinnati 23, Ohio

▲ For more details circle NED-106 J7 on enclosed inquiry slip ▲

3 John Crane® Compounds FOR BETTER SERVICE FROM ALL THREADED CONNECTIONS

"John Crane" Compounds make your threaded connections completely reliable, maintenance-free and longer lasting. They cover a wide variety of industrial services — hot water to destructive acids, pressures to 6000 psi. and temperatures to 1200°F.

PLS® PLASTIC LEAD SEAL

Pipe Joint and Thread Compound — provides a positive, permanently plastic seal that lasts for the life of the connection. Prevents seizing, galling, rust and corrosion. Handles temperatures to 500°F., pressures to 6000 psi.

4-oz. plastic tubes, 1-lb. brush top cans, 1-lb. or 5-lb. friction top cans, 15-lb. or 28-lb. pails, 85-lb. drums

CHEMLON® COMPOUND

Chemical and Corrosive Service Compound — seals and protects connections under the most destructive service conditions encountered in industry. Handles all acids, solvents, toxics or gases at temperatures to 212°F. Remains permanently plastic.

2-oz. jars

Thred-Gard® HIGH TEMPERATURE THREAD COMPOUND

Positively prevents seizing and galling of threaded connections at temperatures to 1200°F. Allows studs, bolts, etc. to be used many times over. Permits connections to be drawn tighter, yet lubricates for easy disassembly.

1/2-pt., 1-pt. or 1-qt. cans

ALL "JOHN CRANE" COMPOUNDS ARE ECONOMICAL BECAUSE LESS IS REQUIRED TO DO THE JOB. TRY THEM!

Request literature. Order a trial sample.

CRANE PACKING COMPANY

6411 OAKTON ST., MORTON GROVE, ILL. (Chicago Suburb)
In Canada: Crane Packing Co., Ltd., Hamilton, Ont.

▲ For more details circle NED-107 J7 on enclosed inquiry slip ▲

Low Volume Screening For Pennies a Ton!

HUNDREDS OF INDUSTRIES ACCLAIM

MIGHTY-MITE

VIBRATING SCREENS

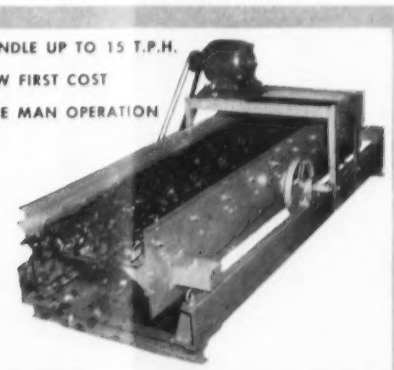
● If you have material to be screened, sized, or separated in low volume (up to 15 T.P.H.) do it the fast, accurate, economical Mighty-Mite way. Easy to set up, easy to operate and easy to move Mighty-Mites are saving money for hundreds of industrial users. Such uses as screening fine powders, removing tobacco dust, separating plastic components, and reclaiming profits from sweepings give you some idea of the possibilities.

Get the Time and Labor Saving Facts Today!

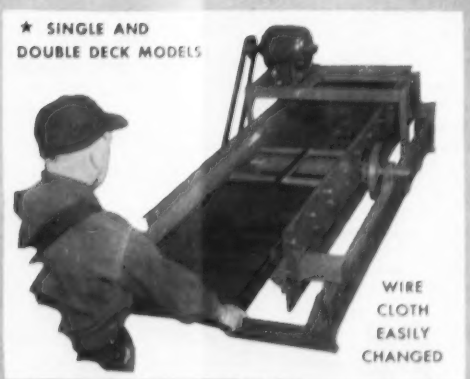
Send for literature and price sheet

SCREEN EQUIPMENT CO., INC., Buffalo 25, N.Y.

★ HANDLE UP TO 15 T.P.H.
★ LOW FIRST COST
★ ONE MAN OPERATION



★ SINGLE AND DOUBLE DECK MODELS



WIRE CLOTH EASILY CHANGED

▲ For more details circle NED-102 J7 on enclosed inquiry slip ▲

Do you Dip or pour Solder . . . or Dispense a drop at a time?

Sta-Warm has exactly the size and style of solder melting and dispensing equipment you need.

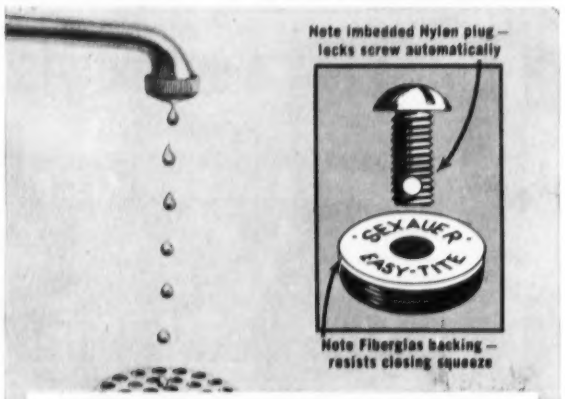
Do you dip printed circuits? Close temperature control of solder for this critical operation is available with Sta-Warm dipping tanks of just the size and shape to fit your laminate handling method.

And every Sta-Warm solder melter holds to high standards of quality and process control.

Inquire today, outlining your solder application. No obligation.

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO
Subsidiary of ABRASIVE & METAL PRODUCTS CO.

For more details circle NED-108 J7 on enclosed inquiry slip



Why Faucets Leak

...9 out of 10 washers are fastened with TOO LONG or SHORT ...screws. The screws QUICKLY LOOSEN, thus loose washers ...are destroyed thru grind and squeeze of opening and ...closing faucets.

34 years of research uncovers new solution

...Now, NEW (Patented) 'Sexauer' SELF-LOCK Monel screws, ...with an imbedded expanding NYLON PLUG, lock at the ...required depth AUTOMATICALLY—hold washers FIRMLY!

...Made of rustproof, non-corroding MONEL, heads don't ...twist off or screw slots distort. They are easy to remove ...when necessary, can be used over and over.

...Used with NEW 'Sexauer' EASY-TITE faucet washers, this ...combination outlasts past faucet repairs "6 to 1"! EASY-...TITES are made of super-tough, pliable du Pont compound ...(neither rubber nor fiber) and reinforced, like a tire, with ...a vulcanized layer of Fiberglas, they resist distortion and ...splitting from shut-off grind and squeeze.

The hidden costs of faucet leaks!

Faucet leaks are costly! As authenticated by Hackensack, N. J. Water Co. and American Gas Association, STOPPING just ONE PIN-HOLE SIZE (1/32") LEAK can reduce water waste 8,000 gal. quarterly. If a HOT WATER FAUCET LEAK, water and fuel savings JUMP to over $7.58 QUARTERLY—plus additional savings on MATERIALS—LABOR—and *costly* FIXTURE REPLACEMENTS!

NEW SELF-LOCK screws and EASY-TITE faucet washers are just TWO of the "SEXAUER" line of over 3000 TRIPLE-WEAR plumbing repair parts and Pat'd. precision tools.

A "SEXAUER" Technician in your vicinity will make our NEW 126 page Catalog "H" available. He will gladly consult with you regarding a SURVEY of your plumbing fixtures to determine correct repair parts required and establish reasonable stock levels that avoid both overstocking and shortages—thus providing for efficient stock arrangement and control—all without obligation. WRITE TODAY!

J. A. Sexauer Mfg. Co., Inc. Dept. AU 97
2503-05 Third Ave., New York 51, N. Y.

Gentlemen: *Please send me a copy of your NEW, 126 page catalog "H."*

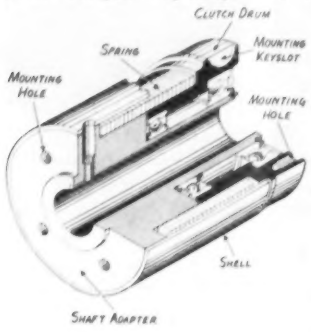
My name ..... Title .....
Company or Institution .....
City ..... Zone ..... State .....

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

For more details circle NED-109 J7 on enclosed inquiry slip

OVER-RUNNING CLUTCHES in 20 to 3000 lb-ft and 8 to 200 lb-in. torque capacities

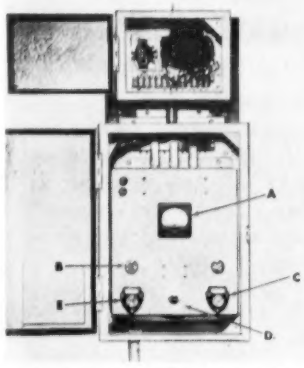
Two lines of standard over-running Precisionspring clutches include ball bearing units from 20 to 3000 lb-ft torque capacity and sleeve or plain bearing units rated 8 to 200 lb-in. Having only a few moving parts, clutches are self-energizing, require little maintenance, and are suited for all over-running, indexing, and backstopping applications.



Rated speed for the smaller sizes in both ball bearing and sleeve bearing types is 3600 rpm. The largest ball bearing and sleeve bearing units transmit their peak torques at 1200 and 2400 rpm, respectively. Inside diameter of spring is smaller than diameter of the driving and driven drums. Thus, spring is in interference fit with both drums, producing a diametral squeeze which causes it to grip both drums. When drive direction is reversed, grip tends to uncoil the spring and expand it, decreasing the radial force and allowing the clutch to over-run. Made by **Curtiss-Wright Corp.**, Marquette Div., 1142 Galewood Drive, Cleveland 10, Ohio.

For more details circle NED-110 J7 on enclosed inquiry slip

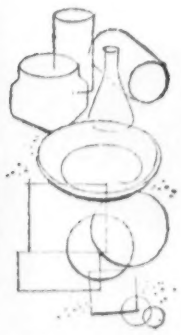
MACHINE TOOL MONITOR detects tool wear, machine overload



In addition to controlling tool feed, the TorqueTrol machine tool monitor detects jamming, tool wear, faulty lubrication, and pump overload. Connected to a recorder, it will register length of tool use, indicate machine operating and idle time and count work strokes if also connected to a counter. Device can control rhythm of step drilling and start chip clearing cycle; tell when conveyor capacity is reached; or warn of excessive die pressure on a press. It monitors electric wattage rather than current and stops the machine in milliseconds, or sounds an alarm. Voltage range is 110-440 v ac, 50/60 cycles, and current range is 0.2 to 100 amp. The single-pole double-throw contacts are rated 5 amp, 115 v, noninductive. Made by **Electronic Control Corp.**, 1571 E. Forest Ave., Detroit 7, Mich.

For more details circle NED-111 J7 on enclosed inquiry slip

Extreme thermal shock has little effect on VYCOR brand glasses.



Can this glass answer any problem of yours?

Heat? VYCOR® brand glasses withstand temperatures as high as 1300° C. (in intermittent service).

Ultraviolet transmission? VYCOR brand glasses are available for ultraviolet transmittance at 365, 254, or 185 millimicrons.

Infrared transmission? VYCOR brand glasses will transmit infrared up to 3.5 microns—with or without transmission of visible light.

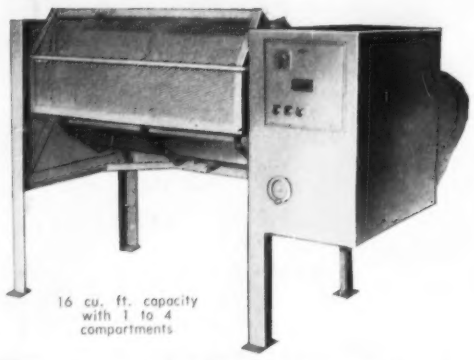
VYCOR brand glasses are resistant to most chemicals, have high electrical resistivity and low dielectric loss.

WRITE FOR BULLETIN B-91. Contains charts, tables and complete information about all 7 VYCOR brand glasses.

CORNING GLASS WORKS
56-9 Crystal Street, Corning, N. Y.
Corning means research in Glass

For more details circle NED-112 J7 on enclosed inquiry slip

NEW HEAVY-DUTY BARREL FINISHING MACHINE SPEEDS PARTS OUTPUT



16 cu. ft. capacity with 1 to 4 compartments

FEATURES

- Direct belt and gear drive without chains and sprockets. Variable speed 8 to 25 rpm.
- Interchangeable barrels to fit any desired compartment make-up.
- Rugged, heavy-duty construction: No-Seam Vinyl - lined barrels.

USE MODEL V-16. Speed finishing work. Cut parts handling costs on small lots or continuous runs. Select individual barrel sizes to fit any desired combination of compartments. The V-16 Precision Barrel Finishing machine has many versatile features to meet your specific needs, assuring maximum output at lower cost. Engineering design is outstanding.

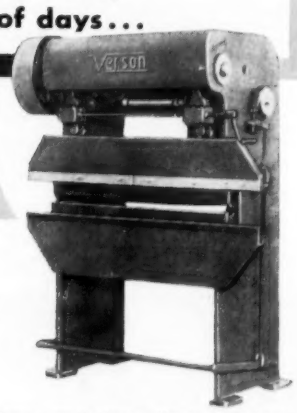
FULL DETAILS are available in new catalog data sheet "V-16". Write for your copy today.

RAMPE MANUFACTURING CO.
14915 WOODWORTH AVE., CLEVELAND 10, OHIO

BARREL FINISHERS • SCREEN SEPARATORS • COMPOUNDS • NYLASLUGS

For more details circle NED-113 J7 on enclosed inquiry slip

$1600* will put this Power Press Brake to work in your shop in a matter of days...



IMMEDIATE DELIVERY FROM STOCK

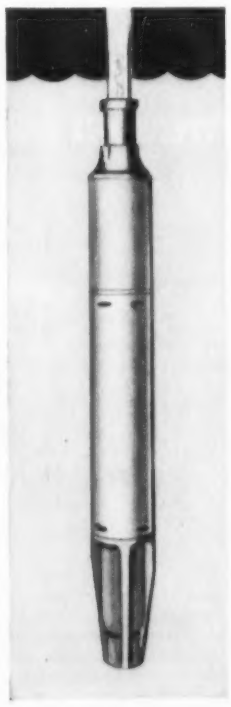
STANDARD DIES
48" long, 90° "V" dies for handling 16 ga. stock in the 16-48 are priced at $102.

If you're trying to "get by" without a power press brake . . . or if you're tying up big brakes on small jobs . . . here's the answer to your problem — a rugged Verson Model 16-48 press brake. You can get one right "off the shelf" for only $1600*. You get the famous Verson all steel construction plus proved-in-service Verson design. Capacity is 16 ga. x 48" of mild steel. Write for complete specifications and then place your order. That's all there is to it . . . no involved proposals . . . no delays.

*Prices F.O.B. Chicago, less dies; subject to change without notice.

ORIGINATORS AND PIONEERS OF ALLSTEEL STAMPING PRESS CONSTRUCTION
VERSON ALLSTEEL PRESS CO.
9329 S. Kenwood Avenue, Chicago 19, Illinois
8300 S. Central Expressway, Dallas, Texas

For more details circle NED-114 J7 on enclosed inquiry slip



Need a submersible motor for your product?

Call Jack & Heintz — America's leading specialists in *Customized* motors (1/3 to 15 hp in submersible models). We'll give you a motor that'll operate in water, oil, gasoline and other fluids . . . a motor that electrically, mechanically and physically fits your submersible pump design perfectly.

We can stretch a motor tall, squat it flat, customize it for ambient rating, and still keep costs reasonable.

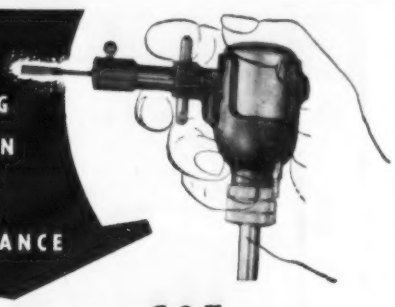
So let us design a motor for your product. We'll fit a motor to it that will make your product perform the way you want it to . . . look as good as it should . . . last as long as you say it will . . . and sell faster because of it.

For ratings and performance data, write for Bulletin No. 9.1. Jack & Heintz, Inc., 17629 Broadway, Cleveland 1, Ohio.

JACK & HEINTZ
CUSTOMIZED ELECTRIC MOTORS

For more details circle NED-115 J7 on enclosed inquiry slip

FOR DIE AND MOLD MAKING
PRECISION FITTING
TOOL MAINTENANCE



THE Di-Profiler

Flexible Shaft RECIPROCATING TOOL

Fast, accurate, versatile

For grinding, filing, scraping, honing, lapping, polishing — the Di-Profiler saves hours of tedious hand labor — especially on intricate, detailed, hard-to-get-at jobs.

Driven by flexible shaft, the machine is light, sturdy, free from vibration. The speed of reciprocation is controlled by foot rheostat and can be varied from 0 to 100 strokes per second; the length of stroke is adjustable from 0 to ¼-inch.

for ANY CONTOUR or FINISH — accessories include diamond files, discs, points and wheels; scrapers, laps, hones and T-C cutters

Write for Free Demonstration or Illustrated Price List DN-97

ENGIS EQUIPMENT COMPANY
431 S. Dearborn St., Chicago 5, Ill.

For more details circle NED-116 J7 on enclosed inquiry slip

The sooner you put Cadillac Quik-Vac to work — the sooner you'll start cutting cleaning costs

Rocket power for WET and DRY CLEANUP. It gets the damaging, deep-down dust and dirt that lodge in machinery . . . picks up filings, chips, dirt, litter, and liquids.

VACUUMS
BLOWS
AIR-SWEEPS
SPRAYS

Cadillac Quik-Vac Model 14 has a 2-speed motor . . . an exclusive feature. High speed (super-suction) for the toughest vacuuming and blowing jobs . . . reduced power for cleaning small parts in stock bins, delicate wiring, etc.

Model 14 has a 3-in-1 Swivel Hose-coupler.* For vacuuming, it connects hose to dirt container or power unit intake . . . for blowing, to the power unit outlet. *Another Cadillac Quik-Vac exclusive that saves time, trouble and money.*

In just seconds, the *2-speed Power Unit can be demounted* for use as a hand-type Blower-Suction Cleaner.

THE *Rugged* MODEL 14
CLEMENTS
Cadillac®
QUIK-VAC

. . . has a new teammate . . . the versatile MODEL 21. This Cadillac Quik-Vac meets the requirements of maintenance women as well as maintenance men. It has super-power, *extra* large capacity, and its wide floor nozzle has a "floating brush" that adjusts itself automatically to any type of floor covering. It's as sturdy as an oak, yet moves about with ease of a ballerina.

WE'LL BE GLAD TO SEND FULL INFORMATION ABOUT THESE CLEMENTS PRODUCTS
- Cadillac Quik-Vac Model 14
- Cadillac Quik-Vac Model 21
- 2-speed portable Blower-Suction cleaner and 3 other job-rated models
- Hot- and Cold-Air Blower
- Furnace Blowers
- Gas Blowtorch
- Huge assortment of attachments for handling scores of cleaning and production jobs

WRITE US FOR COMPLETE INFORMATION and name of our nearest supply dealer

*Patent applied for

write **Industrial Vacuum Cleaner Division**
SINCE 1910 CLEMENTS MFG. CO., 6627 S. Narragansett Ave., Chicago 38, Ill.

Specialists in the manufacture of vacuum cleaning equipment for home, business and industry

Several territories are open for sales representation by verified factory reps

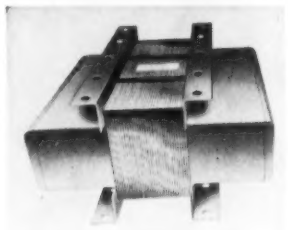
For more details circle NED-117 J7 on enclosed inquiry slip

SAFETY SIGNS
glow in total darkness

Short exposure to daylight or artificial light makes safety Glo-Signs glow visibly for several hours in total darkness. They are used to locate and identify emergency exits, first aid kits, safety switches, emergency control, high voltage lines, and shelter areas. Signs are made on heavy weatherproof paper with a pressure-sensitive adhesive back which adheres to metal, wood, and other surfaces. Indoor life is indefinite, and outdoor life in a semiprotected area is 1 year if covered with Spritzit weatherproof coating. Standard and special legends are offered by **M-M-A, Inc.,** Dept. N, Box 411, Lancaster, Pa.

For more details circle NED-118 J7 on enclosed inquiry slip

TRANSFORMERS
three-phase power circuit type

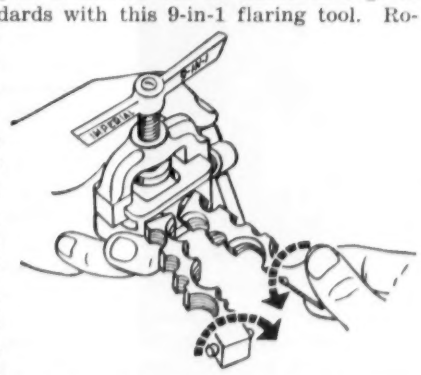


Noise level of less than 45 decibels is maintained in line of three-phase power circuit transformers that can be mounted at the point of load for savings in wiring and labor. Mounting can be to ceiling, wall, or floor on bottom, top, and/or sides. Class B insulation minimizes size and weight. Made by **Jefferson Electric Co.,** 903 S. 25th St., Bellwood, Ill.

For more details circle NED-119 J7 on enclosed inquiry slip

TUBE FLARING TOOL
accommodates ⅛ to ¾-in. sizes

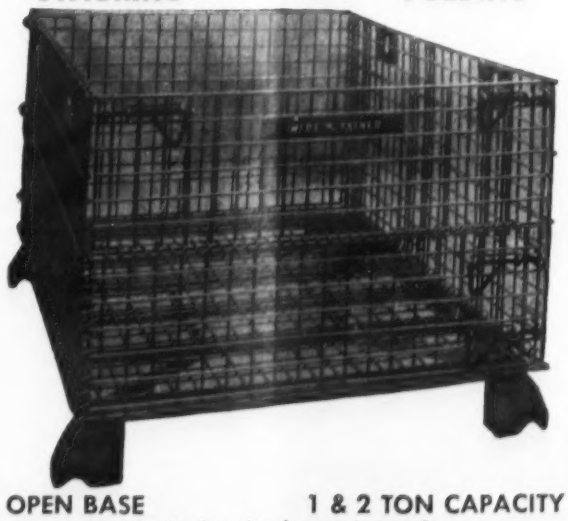
Nine sizes of soft copper, aluminum or brass tubing with ⅛ to ¾-in. diameters can be flared 45 degrees to SAE standards with this 9-in-1 flaring tool. Rotating die bar is readily set up for any tube size. Gage permits checking of tube flare. Hard chrome finish on flaring cone minimizes torque and results in smooth flare face. Price is $11.65. Made by **Imperial Brass Mfg. Co.,** Dept. HSF, 1200 W. Harrison St., Chicago 7, Ill.



For more details circle NED-120 J7 on enclosed inquiry slip

WIRE TAINER

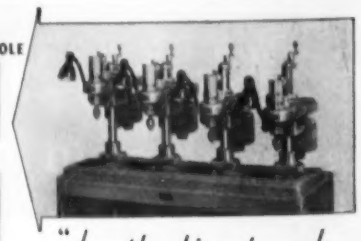
the sensible, convenient way to handle Stock
STACKING FOLDING



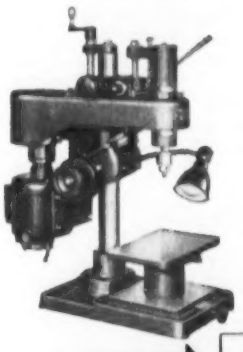
OPEN BASE 1 & 2 TON CAPACITY
Write for circular and details
SPRINGPORT STEEL PRODUCTS CO.
Dept. NED, SPRINGPORT, MICHIGAN

For more details circle NED-121 J7 on enclosed inquiry slip

HAMILTON
SUPER SENSITIVE, SMALL-HOLE
PRECISION
(REPEAT)
PRECISION
DRILLING MACHINES



"for the finest work you do"



Designed and built to *master* the heart-breaking jobs which so often are attempted on drilling machines of "standard" accuracy.

WE WILL SUPPLY FULL INFORMATION FREE
ASK FOR BULLETIN NO. 2468

ADDRESS
THE HAMILTON TOOL COMPANY
901 Hanover Street
HAMILTON, OHIO

IT'S A *Hamilton Tool*
USE IT WITH CONFIDENCE
2468

For more details circle NED-122 J7 on enclosed inquiry slip

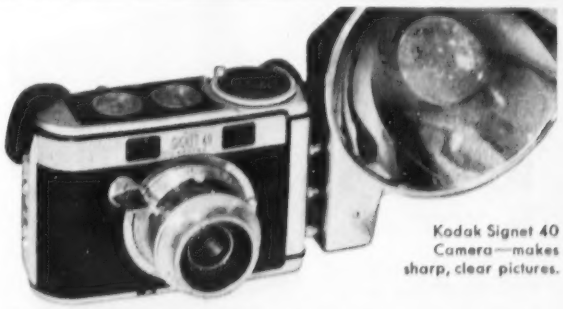
YOU CAN GET 43 STOCK SIZES 1/8" to 3"

HALLOWELL
SOLID STEEL COLLARS
from your industrial distributor

All of these precision-machined solid steel collars are size-marked for quick identification, and fitted with the famous self-locking UNBRAKO Socket Set Screw for positive positioning on the shaft. Write for Bulletin 868. STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

STANDARD PRESSED STEEL CO.
HALLOWELL POWER TRANSMISSION DIVISION **SPS**
JENKINTOWN PENNSYLVANIA

For more details circle NED-123 J7 on enclosed inquiry slip



Kodak Signet 40 Camera—makes sharp, clear pictures.

Simple but capable camera for record pictures, 35mm slides

With this precise yet easy-to-use camera you can make excellent *record pictures* (black-and-white or color) of safety hazards, job setups, breakage claims, research projects, maintenance problems. And you can shoot top-quality slides for training lectures, sales talks, or technical discussions.

The Kodak Signet 40 Camera gives you a fine *f*/3.5 lens, and shutter speeds from 1/5 to 1/400 second—yet it's simple to use. It's small enough to slip in your pocket, carry along on field trips. You'll like the brilliant viewfinder coupled with rangefinder in a single window. Price—only $69,* including flasholder and two reflectors (for both popular types of midget bulbs).

FREE BOOKLET gives you full details. Write for it.

**List price, including Federal Tax. Subject to change without notice.*

EASTMAN KODAK COMPANY
Rochester 4, N. Y.

Kodak

For more details circle NED-124 J7 on enclosed inquiry slip

Not 1, but 9 outstanding features!

Equipto modern-flow LOCKERS

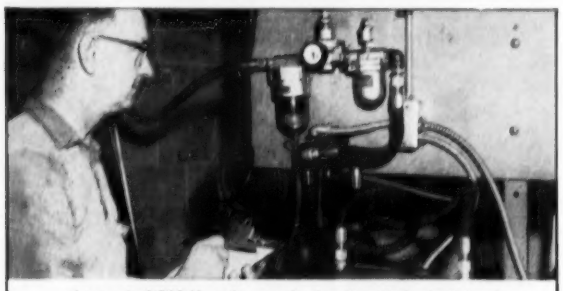
1 six times faster set up
2 no bolted-on parts to come loose or fall off
3 recessed handles
4 pilfer-proof, positive latching mechanism
5 no nuts, no bolts, no tools
6 scientifically designed, attractive louvres
7 low erection and maintenance cost
8 low initial cost
9 new assembly method obsoletes all other locker assemblies

Immediate delivery on Equipto Lockers

Equipto
690 Prairie Avenue
Aurora, Illinois

STEEL SHELVING . . .
PARTS BINS . . .
LOCKERS . . .
DRAWER UNITS . . .
CARTS . . .
WORK BENCHES

For more details circle NED-126 J7 on enclosed inquiry slip



Aeroquip 1503 Hose Lines on hydraulic cylinder test stand have lasted 5 million cycles . . . show no signs of fatigue.

"Aeroquip Hose Lines Ended Fluid Line Failures"

"We Use Them on our Production Equipment and Test Stands" Reports P. F. Ormsby, Plant Manager, Teer-Wickwire and Co.

Because of better resistance to the effects of vibration, flexing and shock, Aeroquip Hose Lines have replaced rigid piping on broaches, lathes and hydraulic test stands at Teer-Wickwire and Company, Jackson, Michigan. "Since switching to Aeroquip," says Mr. Ormsby, failures have been completely eliminated."

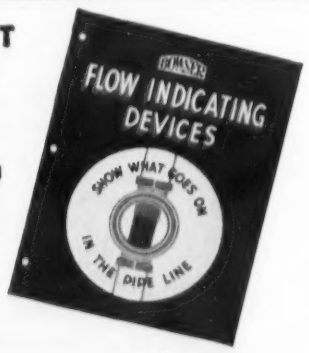
Aeroquip Hose Lines can be quickly made from a small inventory of bulk hose and reusable fittings. Your Aeroquip Distributor is listed in the Yellow Pages of your Telephone Book.

Aeroquip

AEROQUIP CORPORATION, JACKSON, MICHIGAN
INDUSTRIAL DIVISION, VAN WERT, OHIO • WESTERN DIVISION, BURBANK, CALIFORNIA
AEROQUIP (CANADA) LTD., TORONTO 18, ONTARIO
AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A., CANADA AND ABROAD

For more details circle NED-127 J7 on enclosed inquiry slip

THIS BOOKLET "FLOW INDICATING DEVICES" IS YOURS



. . . CONTAINS DATA ON WIDE SELECTION OF FLOW DEVICES SUCH AS:

Fig. 54A Flow Sight — Fig. 816 Teleflo Indicator — Fig. 811 Flow Indicator

Plant and product engineers have relied on Bowser, liquid handling specialists since 1885, for prompt service. For sight glasses in single or double-window types, gravity or pressure models; or for electric or mechanical indicators . . . there is a Bowser man nearby ready to help you . . . quick!

PRODUCT RESEARCH BOWSER

WRITE FOR FLOW DEVICES BOOKLET } Contains Complete Specifications

BOWSER, INC., 1381 E. CREIGHTON, FT. WAYNE, IND.

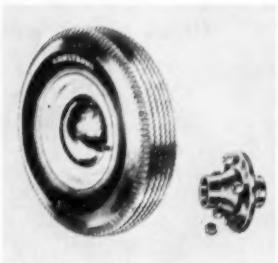
For more details circle NED-128 J7 on enclosed inquiry slip

SOLENOID VALVES
three-way unit for fan coil control

Three-way control of forced circulation, chilled water air conditioning systems is possible with series 500 three-way solenoid valve for fan coil unit control. Using pilot-operated diaphragm amplification, the unit enables the thermostat to control the flow of water either through the heat exchanger of the fan coil unit or to by-pass the coil. Pump pressure build-up and fluid shock are eliminated. Three models have flows from 1.25 to 2.5, 2.0 to 4.5, and 3.5 to 6.0 gpm. Made by **Jackes-Evans Mfg. Co.**, Dept. N, 4427 Geraldine Ave., St. Louis 15, Mo.

For more details circle NED-129 J7 on enclosed inquiry slip

DEMOUNTABLE TRAILER WHEELS
six sizes have interchangeable hubs



Suitable for utility and boat trailers, line of demountable high - speed trailer wheels includes tire sizes ranging from 4.80/4.00x8 to 6.00x12. Hubs in all wheels in this series interchange. The five-bolt hubs comply with all radial, thrust and torsional load conditions of automotive service. Engineering assistance is offered to manufacturers in the selection of suitable size, type and bearing spacing to meet load conditions. Made by **Dico Co.**, Dept. NED, 200 S. W. Sixteenth St., Des Moines 5, Iowa.

For more details circle NED-130 J7 on enclosed inquiry slip

POCKET RESPIRATOR
is durable and comfortable to wear

Particularly suited for use under hot or humid conditions, this pocket respirator is lightweight, comfortable and easy to carry. Body is nylon; replaceable mouthpiece is soft vinyl; and nose clamp is flexible, tempered steel coated with vinyl. Filter cartridges protect against airborne particles, vapors and gases, with types available for special service. Respirators withstand corrosive atmospheres, washing in boiling soap solutions or sterilization in autoclaves. Made by **American Optical Co.**, Safety Products Div., 1492 Mechanic St., Southbridge, Mass.

For more details circle NED-131 J7 on enclosed inquiry slip

LOCKOUT AND BE SURE!

SAFETY MULTIPLE LOCKOUT

For locking out electric switches and fuse boxes where a number of men are working on the same line. Accommodates up to six padlocks. Switch may not be thrown until last man removes his lock. Sturdily constructed yet light and easy to handle. Length overall 8¼". Provides a sound procedure for an everyday problem.

WRITE FOR BULLETIN NO. 95

IPCO Safety Equipment for all Industries
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

For more details circle NED-132 J7 on enclosed inquiry slip

THERE'S NOTHING ELSE LIKE FIBRE-METAL'S NEW...FULL VIEW

#55 Solo goggle™

A "Picture Window" View and Maximum Safety for BRAZING, CUTTING, GAS WELDING, GRINDING and similar hazards.

COOL, LIGHT, COMFORTABLE

No. F-550 "Solo goggle" . . . with headrest for snug or ventilated off-the-face wear. Wide Range Adjustment fits any head size.

INSIDE VIEW of "Solo goggle" . . . showing patented (Designed for Safety) positive retention spring. Lens easy to replace.

This NEW single-cup "Solo goggle" fits easily over Spectacle goggles and personal prescription glasses *for extra protection.* Molded of light, rugged plastic, *"Solo goggle"* is flame resistant and non-irritating to the skin. A *patented spring retainer* makes the filter lens and cover glass easy to change. The spring is of one-piece design . . . SAFE because it has no sharp ends or edges. "Solo goggle" affords a full, unobstructed view of work! *Order this newest and best eye protection NOW from your Safety and Welding Distributor!*

ASK YOUR SAFETY & WELDING SUPPLY DISTRIBUTOR for Bulletin #53, or WRITE US.

The FIBRE-METAL Products Company | CHESTER PENNA.

For more details circle NED-133 J7 on enclosed inquiry slip

Mr. Auburn says:

For a quick and definitive solution to design and production problems, call on Auburn's 85 years of specialized experience in engineering materials to specific sealing and packing applications. Send us your prints and specifications — you'll get our recommendations and quotations promptly!

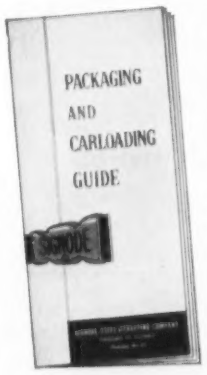
Our extremely wide range of materials includes:

Leather • Asbestos • Teflon
Silicone Rubber
Neoprene Rubber
Cork • Fibre
Compositions • Phenolics
Cloth • Paper • Cardboard
Plastics • Brass • Steel
Copper • Aluminum
Kel-F • Fibreglas
Other Special Materials

THE AUBURN MANUFACTURING COMPANY
306-C Stack St., Middletown, Conn.

Representatives: Atlanta, Ga. • Detroit, Mich. • St. Louis, Mo. • Los Angeles, Cal. • Minneapolis, Minn. • Washington, D.C. • New York, N.Y. • Cincinnati, O. • Rochester, N.Y. • Pittsburgh, Pa. • Fort Worth, Tex.

For more details circle NED-134 J7 on enclosed inquiry slip



FREE!

Signode packaging and carloading guide

Forty-four pages of usable facts that can help you lower freight bills, end pilferage, reduce loss and damage claims, reduce container costs and speed packaging and shipping.

Shows how to apply strapping to containers, brace open top and closed freight carloads, barricade car doorways to protect all types of packaged and bulk commodities. Pictures Signode's complete line of hand and power strapping tools and machines, strapping, seals and accessories.

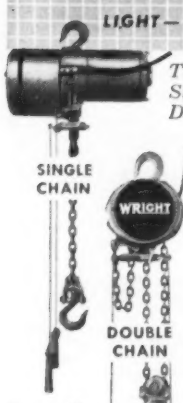
Get your copy of *"Packaging and Carloading Guide"* by mailing this magazine's reply form, or write SIGNODE STEEL STRAPPING COMPANY, 2643 N. Western Ave., Chicago 47, Ill.

THIS SEAL MEANS SIGNODE SECURITY IN SHIPPING

For more details circle NED-135 J7 on enclosed inquiry slip

NEW WRIGHT Electric Chain Hoists

LIGHT—COMPACT—RUGGED—LOW COST



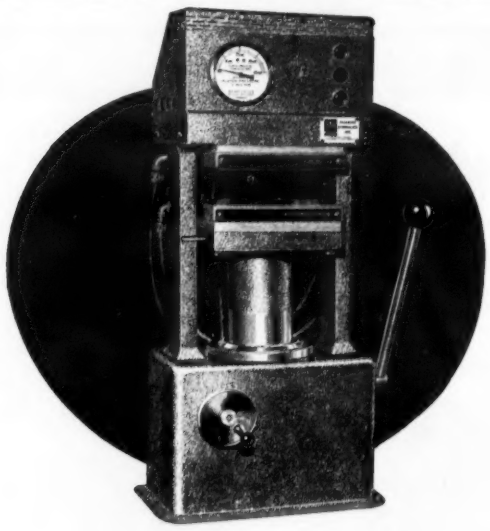
Two capacity ranges as pictured—Single Chain 300 to 2000 lbs. Double Chain 3000 to 4000 lbs.

Long Life · Safety · Minimum Maintenance are assured by these sound features:—Wick Oiling of Load Chain gives a working life many times greater than dry chain ...Fewest Moving Parts of any chain-type electric hoist cuts maintenance...Alloy Steel Load Chain is heat-treated for long-wearing surface, with ductile core to resist shock loads—side-pull won't break this flexible chain...Load Wheel Hooks and Hook Couplings are drop-forged alloy steel...Worm and Gear Drives serve as simple, positive Load Brake, and there's a big, efficient Motor Brake, easy to adjust for lining wear. For complete information, write York, Pa., for **Bulletin DH-73.**

Wright Hoist Division
AMERICAN CHAIN & CABLE
ACCO

York, Pa., Atlanta, Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

For more details circle NED-136 J7 on enclosed inquiry slip



If you need a hydraulic bench press for any purpose in the field of rubber moulding, plastic, laboratory testing or graphic arts, write for circular or if you prefer we'll have our nearest representative call on you...

PHI PRESS *formerly Preco*

Pasadena Hydraulics, Inc., 1433 Lidcombe, El Monte, Calif.

For more details circle NED-137 J7 on enclosed inquiry slip

MAGNETIC BRAKE
torque rated at 25 oz-in.

Computers, antenna controls for radar, and valves on atomic reactors are typical applications for this No. 2SC magnetically released, spring - set, miniature brake. Unit measures 1⅜ in. diameter by 2 in. long, weighs about 8½ oz, is rated at 25 oz-in. torque, and consumes 4.9 w. Designed for direct-current applications, brakes are wound for 28 v. Metallic-bonded friction lining assures long wear, high torque, high thermal capacity, and additional strength. Made by **Stearns Electric Corp.**, Dept. A, 120 N. Broadway, Milwaukee 2, Wis.

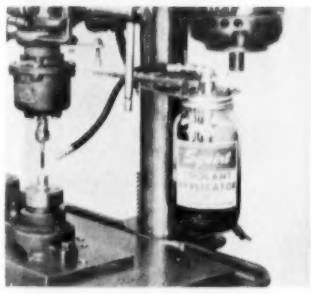
For more details circle NED-139 J7 on enclosed inquiry slip

CIRCUIT TRANSFORMERS
in sizes from 0.050 to 5 kva

Improved line of control circuit transformers, in sizes from 0.050 to 5 kva, can handle up to 1000 per cent inrush current with only 5 per cent voltage drop below rated capacity. Thus, user can usually specify a size based on his sealed volt - ampere requirements. Transformers have space-saving design, interleaved windings, diagrammatic nameplates, screw type terminals and slotted mounting feet. They are varnish impregnated for protection against atmosphere. Made by **Hevi-Duty Electric Co.**, Box 563, Milwaukee 1, Wis.

For more details circle NED-140 J7 on enclosed inquiry slip

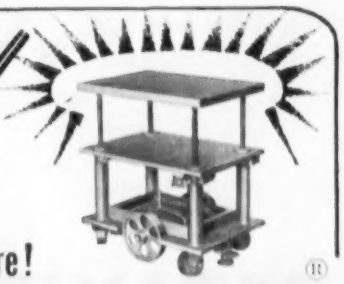
COOLANT APPLICATOR
for drilling and tapping operations



Mounted on any drill press, this Squirt coolant applicator directs coolant exactly where needed and in ample amount for drilling, tapping and other short duration machining operations. Easily fastened on column of drill press, it has a small hydraulic pump that is actuated by downward stroke of spindle. Quickset Flex-Core hose equipped with a nozzle can be adjusted to direct coolant stream on tool or work. Price is $23.50. Made by **Mechanical Appliance Co.**, 1113 N. Franklin St., Chicago 10, Ill.

For more details circle NED-141 J7 on enclosed inquiry slip

NOW



More stamina, more versatile performance than ever before!

PORTELVATOR

The Handy HAMILTON Portable, Elevating Table

NEW NEW convenience in maneuvering! Six wheel models roll easier . . . turn shorter.
NEW provision for increasing table area!

NEW NEW provision for raising and lowering overhanging loads!
NEW overhanging conveyor tops!

NEW FREE LITERATURE illustrates and describes all! Write for Bulletin P-5606. Address, The Hamilton Tool Company, 901 Hanover Street, Hamilton, Ohio.

5606 IT'S A Hamilton Tool
USE IT WITH CONFIDENCE

For more details circle NED-142 J7 on enclosed inquiry slip

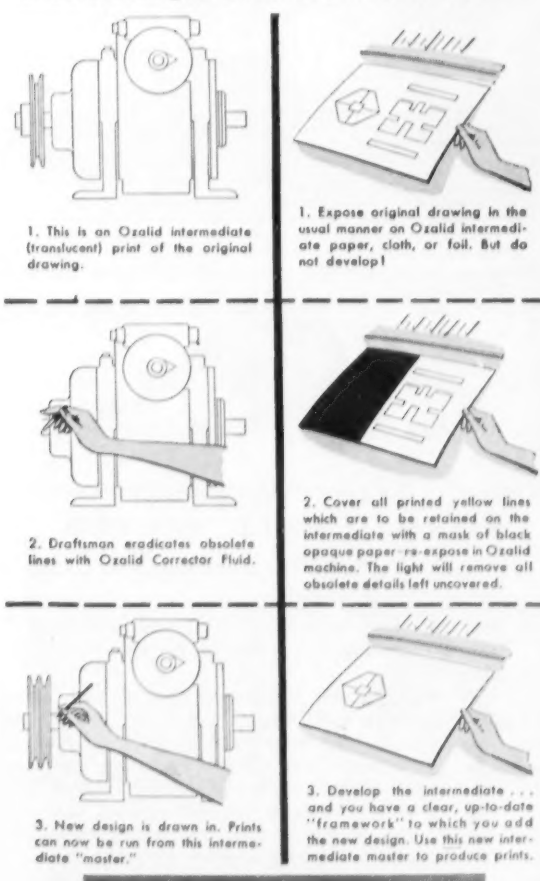
You can make design changes simply...

and save hours of drafting time... with Ozalid's family of intermediate materials

Once . . . just once . . . you run your original drawing through your Ozalid machine with a piece of Ozalid intermediate material. Then file away your drawing. Your Ozalid intermediate copy becomes a duplicate original—all set to give important benefits.

Take design changes, for instance. When you have an Ozalid intermediate print, there's no need to trace or redraw the original design. Changes are as easy as 1-2-3 . . . just see below!

For more information contact your local Ozalid man—his name is in the phone book. Or write for folder to: Ozalid, Dept. S-9, Johnson City, N. Y. In Canada: Hughes Owens Co., Ltd., Montreal.



1. This is an Ozalid intermediate (translucent) print of the original drawing.

1. Expose original drawing in the usual manner on Ozalid intermediate paper, cloth, or foil. But do not develop!

2. Draftsman eradicates obsolete lines with Ozalid Corrector Fluid.

2. Cover all printed yellow lines which are to be retained on the intermediate with a mask of black opaque paper—re-expose in Ozalid machine. The light will remove all obsolete details left uncovered.

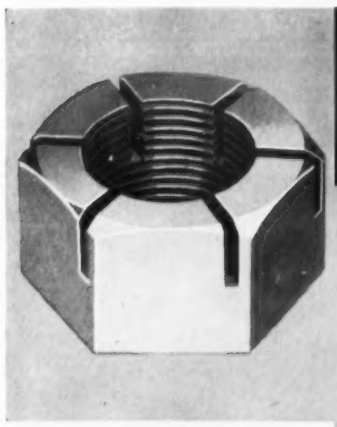
3. New design is drawn in. Prints can now be run from this intermediate "master."

3. Develop the intermediate . . . and you have a clear, up-to-date "framework" to which you add the new design. Use this new intermediate master to produce prints.

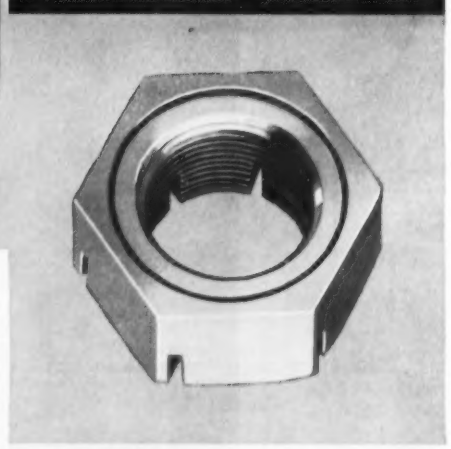
OZALID®
Products for Design

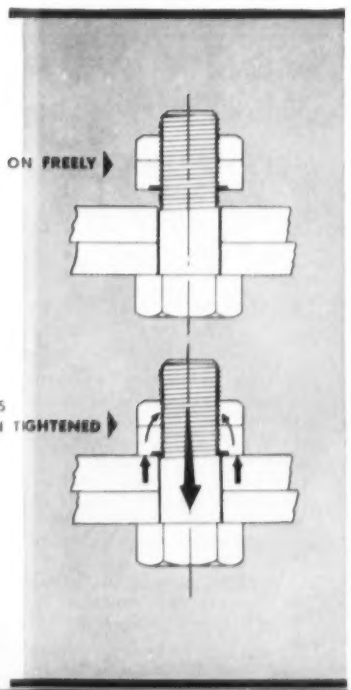
A Division of General Aniline & Film Corporation
In Canada: Hughes Owens Company, Ltd., Montreal

For more details circle NED-143 J7 on enclosed inquiry slip



the MARSDEN free running lock nut





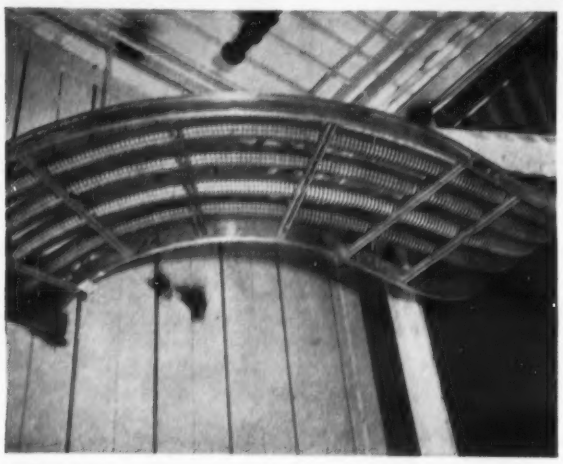
The Marsden action can be incorporated into nuts of any size or material, with standard or special threads—its action relieves the heavy concentration of stress in the lower threads of a conventional nut.

Manufacturer of Standard and Special "12 Pointer and Hexagon Nuts..."Huglock" and "Marsden" locknuts.

Complete engineering data, specifications and prices are contained in a twenty-four page Marsden section of our catalog

NATIONAL MACHINE PRODUCTS COMPANY
UTICA ROAD UTICA, MICHIGAN

For more details circle NED-138 J7 on enclosed inquiry slip



ARMOR CABLE FOR QUICK NEW POWER

Need to expand or relocate power feeders? Anaconda Duralox* Interlocked-armor cable lets you put power where you want it—fast, economically. Made with its own tough, yet flexible armor, Duralox is installed without conduit. It is laid quickly—indoors or out—on light, easily installed racks, trained smoothly around corners, columns and other obstructions in long, uninterrupted runs. Metal armor affords high protection against damage. NEW BULLETIN DM 5606 contains full information. Write for free copy to: Anaconda Wire and Cable Company, 25 Broadway, New York 4, N. Y.

57405

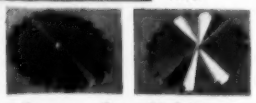
ANACONDA®

*Reg. U.S. Pat. Off.

For more details circle NED-144 J7 on enclosed inquiry slip

FOR NATIONALLY FAMOUS HEINEMANN SAWS

Below: Heinemann Saw before and after Brightboy polish. Left: Before; Right: After



A mirror like Brightboy finish not obtainable by any other form of polishing

"Brightboy's unique RUBBER and ABRASIVE action produces the superb finish which reflects the high skill of our craftsmen and our use of the finest materials", says Mr. William Heinemann of Heinemann Saw Corp., Canton, Ohio.

FOR MANUFACTURING & MAINTENANCE OF TOOLS
SINGLE-STEP BURRING, CLEANING, FINISHING, POLISHING

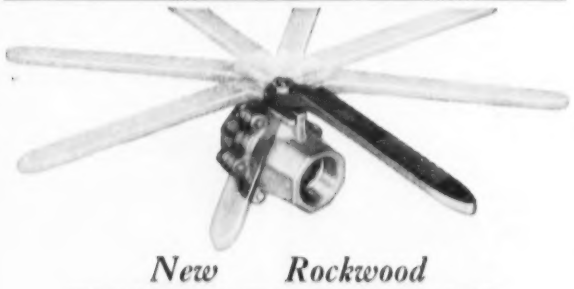
An Entirely New Concept of Abrasive Applications

Stock numbers, match-mated to your requirements. Silicon Carbide and Aluminum Oxide grains, from extra fine to extra coarse. Soft, firm and tough rubber binders. Ask your dealer for catalog listing grains, textures, applications, machine speeds. Write us if he cannot supply you or on any problem in which finishing is involved.

BRIGHTBOY INDUSTRIAL DIVISION
WELDON ROBERTS RUBBER CO.
95 North 13th Street Newark 7, N.J.
America's Pioneer Manufacturer of Rubber-Bonded Abrasives

WELDON ROBERTS Brightboy RUBBER CUSHIONED ABRASIVES

For more details circle NED-145 J7 on enclosed inquiry slip



New Rockwood FORGED BALL VALVES
8 ways easier to handle

New Rockwood Ball Valves are made of forged brass for greater tensile strength and safety. You're assured of Full, Round Flow and fast, efficient operation and less friction loss too.

The handle of the new Rockwood Forged Ball Valve can be positioned in 8 different ways *giving you greater convenience.* The ¼ turn opens and closes the valve — *giving you Full, Round Flow, efficient operation, less friction.* The pressure of fluid in the Rockwood Forged Ball Valve automatically positions the ball against the synthetic rubber seat — *giving you a leakproof seal.* The forged brass ball in the Rockwood Forged Valve is chrome-plated to stand up under abrasion, pitting, scratching — *giving you trouble-free service.*

The new Rockwood Forged Ball Valves are tested and listed by Underwriters' Laboratories, Inc.

ROCKWOOD SPRINKLER COMPANY
2284 Harlow Street, Worcester 5, Mass.

For more details circle NED-146 J7 on enclosed inquiry slip

WATER COOLER-HEATER
uses either a 3 or 5-gal bottle

Both cold drinking water and 185° F water are provided by this dispenser which uses either a 3 or 5-gal bottle. It measures 39½ in. high by 15 in. square and has a welded steel cabinet with gray hammertone enamel finish. Also featured are a 2-qt drain receptor and pushbutton faucets, including an insulated hot water faucet. Model USB1 cooler has a 1-gal stainless steel reservoir. Combination model USB1-H cooler-heater has a thermostatically controlled heated tank (maintained at zero pressure) and ample capacity to serve 10 successive hot drinks. Prices are $155 and $220, respectively. Made by **Sunroc Corp.**, Div. R, Pennell Rd., Glen Riddle, Pa.

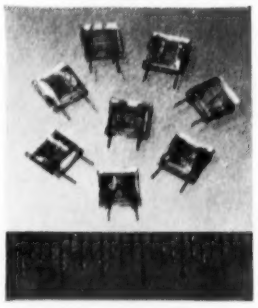
For more details circle NED-147 J7 on enclosed inquiry slip

ONE-PIECE LOCKNUT
is reversible and reusable

Uniform locking torque is assured by the 360-degree locking action of the Reverse-Lok one-piece all-metal locknut. It is reversible and reusable; and is available in steel, brass, aluminum, and stainless steel in standard sizes. Made by **Jacobson Nut Mfg. Corp.**, Dept. N, Box 177, Kenilworth, N. J.

For more details circle NED-148 J7 on enclosed inquiry slip

GLASS CAPACITORS
designed for printed circuit use

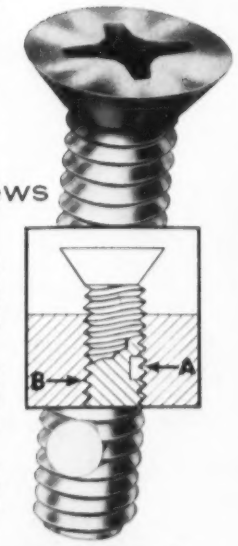


High temperature soldered leads allow subminiature fixed glass WL capacitors to be connected directly to printed circuit boards without clamping. Less than 0.1 in. thick, they are suitable for vertical mounting in small, high rated circuits. Fixed temperature coefficient, high insulation resistance, low dielectric absorption and ability to operate under high humidity and high temperatures are features. The 0.3 x 0.3-in. WL-4 unit is rated up to 1000 micromicrofarads at 300-v. Larger WL-5 measures 0.3 x 0.5 in. and is made in capacitances up to 2200 mmfd at 300 v. Neither unit requires a protective casing. Made by **Corning Glass Works**, Dept. 21, Box 544, Corning, N. Y.

For more details circle NED-149 J7 on enclosed inquiry slip

WON'T WORK LOOSE!

Continental HOLTITE **NYLOK®** Self-locking Screws



Resilient nylon plug (A) sets up a lateral thrust, wedges mating threads together (B). Locking is positive — seated or unseated. Screw cannot work loose.

The simplest self-locking fasteners, NYLOK Screws are easy to drive . . . can be removed and replaced . . . act as seal for gases, liquids.

NYLOK may be the answer to your assembly problem. For complete details write Dept. ND.

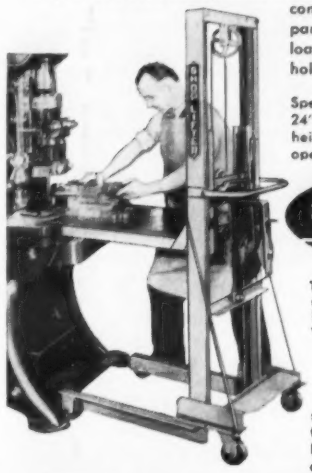
CONTINENTAL
SCREW COMPANY, NEW BEDFORD, MASS.
HOLTITE FASTENERS

PHILLIPS AND SLOTTED HEAD TAPPING SCREWS, WOOD SCREWS, MACHINE SCREWS, SEMS, BOLTS, NUTS, STANDARD OR SPECIAL . . . FOR ANY ASSEMBLY

For more details circle NED-150 J7 on enclosed inquiry slip

500 lb. Lifter- NOW $210 f.o.b. Chicago

Pays for itself over and over again in time saved and by avoiding lifting injuries in moving dies, machine parts and stacking. Can be used as adjustable height work table. Rugged, simple construction, with few moving parts, has high safety overload factor. Automatic clutch holds load at any height.



Specifications: platform 24" x 24", lifting height 4' 6". Overall height 6' 0". Width 24". Foot operated floor lock.

SHOPLIFTER

This sturdy, general purpose lifter makes it easy for one man to handle lifting jobs quickly and with complete safety.

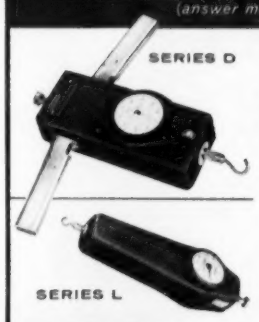
Order Today— Free Trial

specify 10 day free trial, with full credit return privilege. 1000 lb. and 2000 lb. Shoplifters also available.

ECONOMY ENGINEERING 4519 W. Lake St. Chicago 24 Illinois

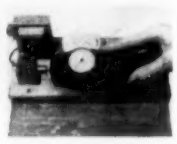
For more details circle NED-151 J7 on enclosed inquiry slip

PRECISION FORCE GAGES
(answer many test standard requirements)



Hunter Mechanical Force Gages are precision-built, direct reading instruments for measuring forces in tension and compression. Are accurate to within 1% of full-scale. "Hold-at-maximum" indicator available as optional feature. Types and sizes available for measuring forces ranging from 0-500 grams to 0-200 pounds.

Standard part of military aircraft kit, Force Gage is a tool for adjustment of controls.



Force Gage is fixture held to test precise electrical assemblies.

Plastics manufacturers use Force Gage to test bond strength of foil coatings on laminates

Thousands of force gages now used for inspection, testing, quality control in labs, on production lines, in the field.

WRITE FOR BULLETIN 750C

HUNTER Gauges in Springs **HUNTER SPRING COMPANY**
14 Spring Avenue, Lansdale, Pennsylvania

For more details circle NED-152 J7 on enclosed inquiry slip

THOMSON **NYLINED® BEARINGS**

REDUCE COSTS— ELIMINATE LUBRICATION

ADDITIONAL BENEFITS:

- CLOSE FIT
- LONGER LIFE
- EASILY INSTALLED
- LESS SERVICING
- SELF-RETAINING
- RESIST CORROSION
- LOW FRICTION
- RESIST POUNDOUT
- NO FRICTION OXIDATION
- DAMP VIBRATION
- OPERATE IN LIQUIDS
- NON-CONTAMINATING
- INSTANTLY REPLACEABLE
- RESIST ABRASION
- MINIMUM SPACE
- SILENT OPERATION
- LIGHTEST WEIGHT
- REDUCED WEAR

NYLINED Bearings are a highly engineered thin liner of DuPont Nylon, designed to bring bearing users the many benefits of Nylon as a bearing material by solving most of the limitations surrounding its use. The compensation gap principle assures maintenance of diametral tolerances for precision applications.

Seven Standard Types available from stock. Write for literature and name of your local representative who stocks NYLINED Bearings for immediate shipment.

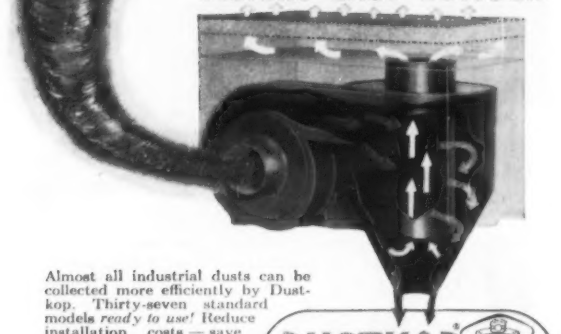
THOMSON INDUSTRIES, Inc.
DEPT. 9, MANHASSET, NEW YORK

Also—Manufacturers of BALL BUSHINGS . . . the Ball Bearing for Linear Motions and 60 CASE . . . Hardened & Ground Steel Shafting

For more details circle NED-153 J7 on enclosed inquiry slip

CYCLONE SEPARATION

FOR MORE EFFICIENT DUST COLLECTION —FILTERS LAST LONGER



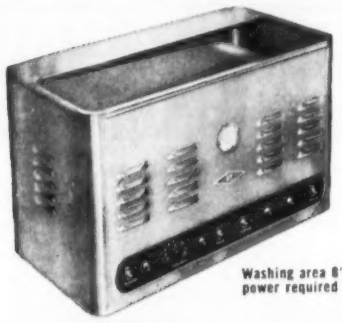
Almost all industrial dusts can be collected more efficiently by Dustkop. Thirty-seven standard models *ready to use!* Reduce installation costs — save space. Write for descriptive literature.

DUSTKOP STOPS DUST

ALSO A COMPLETE LINE OF MIST COLLECTORS

AGET MANUFACTURING COMPANY
1396 EAST CHURCH ST., ADRIAN, MICH.

For more details circle NED-154 J7 on enclosed inquiry slip



Washing area 8" x 8" x 8"; power required 115V 60 cycles.

Compact "PACKAGE" Unit cleans Parts ULTRASONICALLY in Seconds

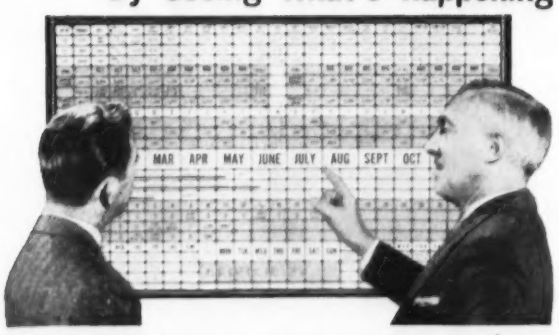
The Curtiss-Wright Ultrasonic Washer WB1-5 provides an improved parts cleaning method which meets today's higher standards, closer tolerances and ultra-precision design of component parts. Now practical for all types of production parts washing, this self-contained stainless steel unit *super-cleans* all dirt and grease away in mere seconds, even the most complicated or "problem" shapes having grooves and hollow areas. Space-saving, safe to operate and low in cost, the WB1-5 can effect a saving of up to 75% over conventional parts cleaning methods. Our engineers will arrange demonstrations.

INDUSTRIAL AND SCIENTIFIC PRODUCTS DIVISION
CURTISS-WRIGHT
CORPORATION • CALDWELL, N. J.

Canadian Representative: Curtiss-Wright Of Canada Limited, Montreal

For more details circle NED-155 J7 on enclosed inquiry slip

You Get Things Done Better By Seeing What's Happening



BOARDMASTER VISUAL CONTROL

- ★ Gives Graphic Picture of Your Operations in Color.
- ★ Facts at a Glance—Saves Time and Prevents Errors.
- ★ A Simple, Flexible tool—Easily Adapted to Your Needs.
- ★ Easy to Use. Type or Write on Cards, Snap on Board.
- ★ Ideal for Production, Scheduling, Sales, Inventory, Etc.
- ★ Compact, Attractive. Made of Metal. Over 150,000 in Use.

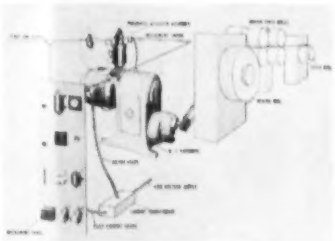
Complete Price $49.50 Including Cards

FREE 24-Page ILLUSTRATED BOOKLET N-200 Without Obligation

GRAPHIC SYSTEMS, 55 West 42nd St., New York 36, N. Y.

For more details circle NED-156 J7 on enclosed inquiry slip

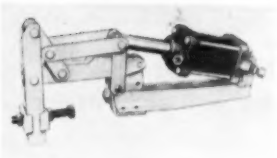
REWIND TENSION CONTROL compensates for roll size



Tension constant within 5 per cent of any preset value is maintained by this automatic rewind tension control system. It supplies the need for variable speed by reducing the speed of the Varidrive unit as the rewind roll diameter builds up. Tension can be tapered to give 50 per cent less at the finish than at the start of the roll. Easily installed on existing equipment, system is fully automatic, has simple controls and can be supplied with Varidrives rated from 1 to 50 hp. Speed ranges are up to 7:1. Made by **U. S. Electrical Motors Inc.**, Dept. NED, 200 E. Slauson Ave., Los Angeles 54, Calif.

For more details circle NED-157 J7 on enclosed inquiry slip

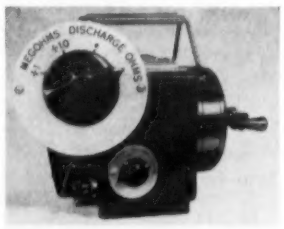
AIR CLAMP exerts 800 lb holding pressure



Added to the Knu-Vise line of air clamps is this 800 model capable of exerting 800-lb holding pressure. This unit is offered in the AO-800 toggle model for conventional clamping and the AODT-800 double-toggle model for around-the-corner clamping. Line now includes 200, 400, 1200, and the new 800-lb clamp. Made by **Lapeer Mfg. Co.**, 3062 Davison Rd., Lapeer, Mich.

For more details circle NED-158 J7 on enclosed inquiry slip

INSULATION TESTER improvements increase its utility



Increased versatility for the hand-operated generator Meg type Megger insulation tester is afforded by a new four-position switch. Additional improvement is use of Earth, Line and Guard terminals, so arranged that connections need not be changed when switching to the ohm scale. The ratio switch (A) divides by 10 the regular megohm scale. Discharge switch (K) permits discharge of capacitance in the apparatus under test. It short-circuits the testing terminals through a current-limiting resistor. The ohm scale (R switch) has a range of 0 to 10,000 ohms for testing conductor resistance without using other test equipment. Made by **James G. Biddle Co.**, Dept. 21-45a-22, 1316 Arch St., Philadelphia 7, Pa.

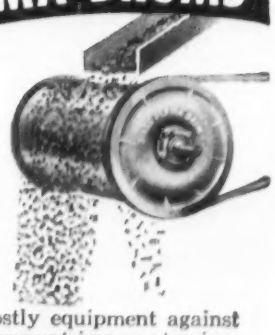
For more details circle NED-159 J7 on enclosed inquiry slip

Where no other type of Magnetic Separator is practical . . .

use

DINGS PERMA-DRUMS

- in machines
- under chutes or spouts
- below apron conveyors
- in any confined space



Now you can protect costly equipment against tramp iron damage . . . prevent iron contamination of materials and products . . . in spots where no other type of magnetic separator can operate efficiently.

Why take a chance on tramp iron damage? Investigate the money-saving potential of Dings powerful, automatic, life-time guaranteed Perma-Drums.

Every feature is fully explained in Catalog C-1100-A. Write for your copy today.

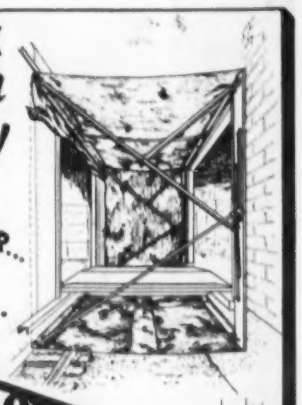
Dings DINGS MAGNETIC SEPARATOR COMPANY
4758 W. Electric Ave., Milwaukee 46, Wis.

PD-157 1/9

For more details circle NED-160 J7 on enclosed inquiry slip

LOADING DOCK Protection IN minutes! ALL WEATHER... YEAR 'ROUND... one-man operation... self-adjusting...

TRUCK or RAIL



CAR-DOX

HEAVY-GAUGE STEEL FRAME ARMS COVERED WITH TOUGH, DURABLE INDUSTRIAL FABRIC OPERATE ON TENSION-SPRING—SLIDE-BAR ASSEMBLIES. UNITS EXTEND AUTOMATICALLY, RETRACT EASILY TO WITHIN 9 in. OF BUILDING. TORSION FEATURE ASSURES POSITIVE PROTECTION EVEN WHEN UNITS ARE EXTENDED AGAINST UNEVEN SURFACES.

A MODEL TO FIT YOUR DOCK REQUIREMENTS.

Complete information with test samples of fabrics on request... ...WRITE...

FROMMELT Industries
BOX 419 · DUBUQUE · IOWA

For more details circle NED-161 J7 on enclosed inquiry slip

The high sign

"WHERE *Good Connections* COUNT"®

The Pushomatic Quick Coupling requires only a light, quick, one-hand push. Locks automatically—without twisting or turning—to make an impact proof and leakproof seal. 360° swivel action eliminates kinking of line. Integral check valve permits connecting or disconnecting under pressure without backlash and whipping.

The Pushomatic is ideal for fluid and gas applications up to 10,000 PSI. Pipe sizes ⅛" through ¾". Also straight through Quick Couplings ¼" through 3". For full information contact our nearest office or write for Bulletin 1500.

*Patented

PERFECTING SERVICE CO.
332 Atando Ave. Charlotte, N. C.
Baltimore—Buffalo—Camden, N. J.—Chicago—Cleveland
Los Angeles—New York—Providence—Montreal—Toronto

For more details circle NED-162 J7 on enclosed inquiry slip

2 to 4 times faster

BOSTITCH H2B STAPLING HAMMER

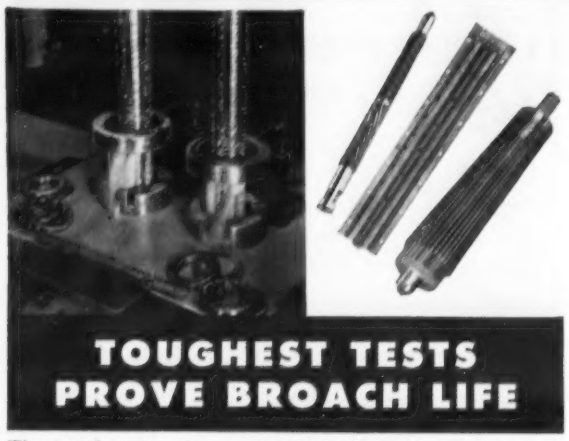
speeds light nailing jobs by two to four times compared to conventional hammers and nails. Cuts costs as much.

It's light in your hand and fits your fist. Its rugged construction takes years of pounding. One loading lets you swing 160 staples securely into place.

Your Bostitch Economy Man will show you the H2B and other tools to cut your costs. Look under "Bostitch" in your phone book, or write for free bulletin to Bostitch,
689 Briggs Drive, East Greenwich, Rhode Island

Fasten it better and faster with BOSTITCH STAPLERS AND STAPLES

For more details circle NED-163 J7 on enclosed inquiry slip



TOUGHEST TESTS PROVE BROACH LIFE

The toughest proving ground in industry for Continental broaches is the rugged day-in, day-out production in Ex-Cell-O plants. Continental experience will make a big difference in *your* broaching operations.

Send your broaching problems to Continental. Top broaching experts will work them out, putting proven broaching methods to work for you. No obligation, of course.

CTW

Continental TOOL WORKS
Division of Ex-Cell-O Corporation
Detroit 32, Michigan

57-54

For more details circle NED-164 J7 on enclosed inquiry slip

Pumps abrasive liquids that grind other pumps to a halt

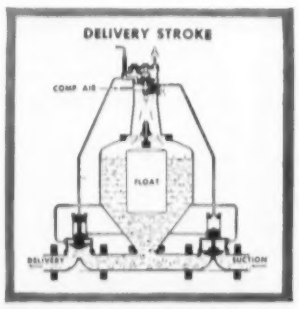
Suspended silicon-carbide, pottery slip, gritty sumps—violently abrasive liquids and semi-solids of all kinds flow smoothly through *Ejectopump*. Compressed air operated, it has no rotating or reciprocating parts, no bearings, no packing, needs no lubrication. Requires little attention of any kind, yet keeps on pumping abrasives month after month, long after other pumps have ground to a halt.

Secret of *Ejectopump's* dependability is its smooth, yet powerful action—no churning, whirling or chopping of material being pumped.

Operation

Connect to compressed air line 30 to 50 psi. Handles discharge heads up to 100 ft., with maximum suction 20 ft. Pump is self-priming, may be installed above level of liquid pumped. Can be furnished in special alloys for pumping corrosives. Sizes: 1½", 2", 3", 4", 6".

WRITE TODAY for complete information and prices.



FERRO

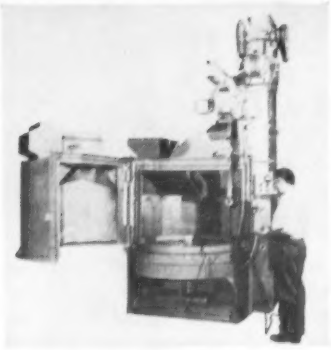
FERRO CORPORATION
4150 East 56th Street, Cleveland 5, Ohio

Ejectopump

COMPRESSED AIR OPERATED

For more details circle NED-165 J7 on enclosed inquiry slip

BLAST CLEANING TABLE
handles up to 48 x 24-in. castings



Castings, forgings and stampings up to 48 in. diameter by 24 in. high, as well as plastic and composition materials, can be economically blast-cleaned in this 4-ft diameter cabinet-type Rotoblast table. Machine will handle loads weighing up to 4000 lb and is equipped with a cast labyrinth seal which makes the cabinet abrasive-tight without rubber gaskets. Opening of single door exposes half of the rotating work table. Single overhead Rotoblast wheel, powered by 10-hp motor, throws 15,000 lb of abrasive per hour. A 15-hp motor which will throw 22,000 lb of abrasive per hour is optional. Self-contained automatic elevator and separator continuously clean used abrasive. Made by **Pangborn Corp.**, 140 Pangborn Blvd., Hagerstown, Md.

For more details circle NED-166 J7 on enclosed inquiry slip

PORTABLE FIRE EXTINGUISHERS
actuated simply by pulling trigger

Twenty and 30-lb capacities are offered in this dry chemical type portable fire extinguisher. User simply aims discharge horn at the fire and pulls the trigger. Removing horn from clip bracket unlocks trigger for use. Pressure gage recessed in the handle tells at a glance if extinguisher is charged and ready for use. Special baffle nozzles reduce discharge velocity without reducing the range. Extinguisher is UL-approved and meets environmental test requirements of the U.S. Army and Air Force for ground support service equipment. Made by **Walter Kidde & Co.**, Dept. A, 675 Main St., Belleville 9, N. J.

For more details circle NED-167 J7 on enclosed inquiry slip

Hermetic Seals

Hermetic Seal Corp.—Over 10,000 different types of hermetic seals for electronic components made by this company are described in 16-page illustrated catalog. Vac-tite compression multiheaders and plugs are grouped according to type, with dimensioning standardized for easy reference.

For more details circle NED-168 J7 on enclosed inquiry slip

TIME RECORDER + TOTALIZER

automatic, continuous, operating data can be the difference between Profit and Loss!

Modern plant operation demands the most efficient and accurate means of evaluating both machine and man-power production . . . that's why leading companies everywhere are equipping their production lines, processes, systems and office machines with Time Recorder-Totalizers.

The Time Recorder-Totalizer monitors the operation of any machine, process or system by chronologically recording the time and duration of every "on" and "off" period during each day.

The Time Recorder-Totalizer makes it possible to analyze the efficiency and performance of any type of equipment plus simplifying cost accounting.

The TIME RECORDER-TOTALIZER incorporates the following features:

SPROCKET DRIVEN CHART . . . accurately timed . . . chronologically printed . . . available in speeds from one inch per hour to ten inches per minute . . . 250 linear feet per roll . . . each $1.25.

ELAPSED TIME METER . . . (Time Totalizer) registers accumulated "on" or production time.

AUTOMATIC REWIND ATTACHMENT with housing . . . facilitates inspection of strip chart during any period throughout the entire roll. (available for all models . . . $7.50 extra)

RUGGED CONSTRUCTION assures long carefree operation.

For complete information write to: NED-R3-9.

standard INSTRUMENT CORPORATION
DIVISION OF HEAT-TIMER CORPORATION

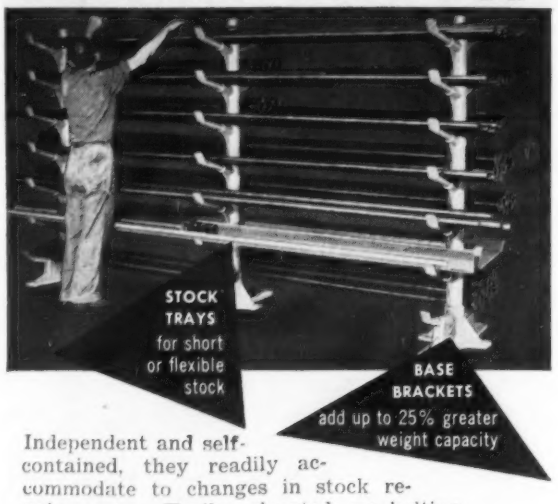
657 BROADWAY, NEW YORK 12, N. Y.

Mfrs. of: Heat-Timer Electronic Controls, Heat Recorder-Totalizer, Varivalve, Thermovalve, Main Line Quick-Vent Valve, Motorized Valves, Smoke-Eye Smoke Alarm, Fire-Chief Fire Alarm, H-T Burner Alarm.

VISIT BOOTH 855 AT I.S.A. SHOW!

For more details circle NED-169 J7 on enclosed inquiry slip

FLEXIBLE STORAGE

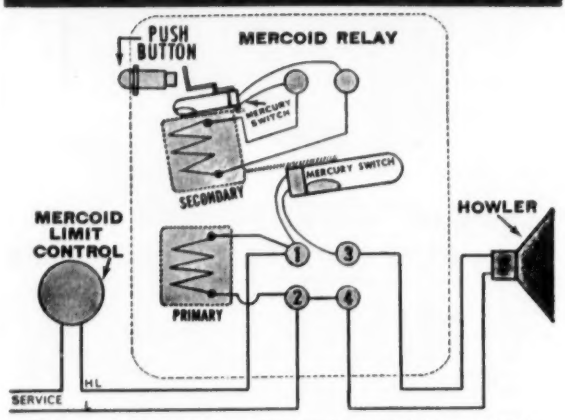


Independent and self-contained, they readily accommodate to changes in stock requirements. Easily relocated; no bolting. You get more into less space; you save time in storing and issuing with Brown Section Racks. Iron and steel construction. Can't burn, warp, sag. Never wear out. Eliminate safety hazards. Act now! Write for complete specs and prices on models and sizes. Brown Engineering Co., 129 N. 3rd Street, Reading, Pa.

BROWN QUICK-SERVE RACKS

For more details circle NED-170 J7 on enclosed inquiry slip

MERCOID RELAY FOR AUDIBLE ALARM



When Limit Control closes its circuit, current is supplied to primary coil of Mercoid Relay and through the normally closed mercury switch to the "Howler" (alarm). To stop "Howler," operator pushes in "push button" which manually raises relay secondary and breaks circuit to "Howler." Secondary is held up by magnetic repulsion until condition is corrected. When limit control opens the primary circuit of relay, secondary coil drops to normal position and relay is automatically ready for another operation.

WRITE FOR BULLETIN CA-8R

THE MERCOID CORPORATION, 4201 BELMONT AVE., CHICAGO, ILL.

For more details circle NED-171 J7 on enclosed inquiry slip

SWIFT Glass Body Oil Cups

SUPPLIED FROM STOCK!

Let Swift supply you with Glass Body Oil Cups from its complete stocks. Oil Cups have polished brass finish, tough heat-and-stain resistant Pyrex glasses. Available in all standard sizes for immediate delivery.

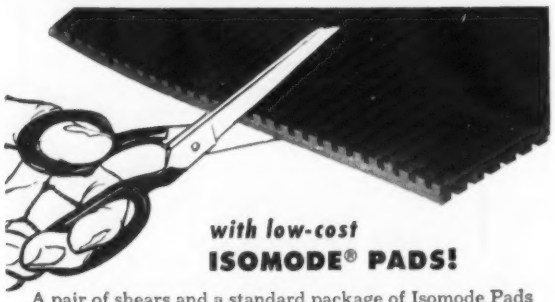
Sight Feed & Plain Glass Oil Cups For gravity feed oiling of bearings and other points where no back pressure exists. Spring loaded slide opening on lid keeps dust and dirt from bowl.

Gas Engine Lubricators For gravity feed of oil against pressure on gas engines, blowers, vacuum pumps, low pressure air pumps.

SWIFT *Glass Division*
SWIFT LUBRICATOR COMPANY, INC.
5 Glass St., Elmira, N.Y.

For more details circle NED-172 J7 on enclosed inquiry slip

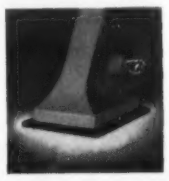
If you can use shears you can CONTROL VIBRATION



with low-cost ISOMODE® PADS!

A pair of shears and a standard package of Isomode Pads ... that's all you need to isolate troublesome shock and vibration on some 80 tons of machinery.

Made of durable, resilient DuPont neoprene, these ribbed pads support up to 50 lbs. per sq. in.—do an effective job of muffling plant noise and reducing maintenance costs on machines and buildings.

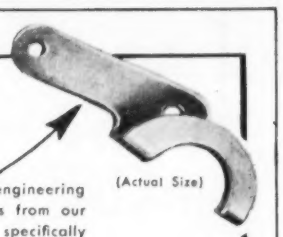


Installation is utter simplicity—simply cut to fit machine feet and install. No waste, no fuss, minimum down time. Write for prices and Application Bulletin No. 415.

MB MANUFACTURING COMPANY
A division of Textron Inc.
1066 State Street, New Haven 11, Conn.

For more details circle NED-173 J7 on enclosed inquiry slip

SAVED— $696.00 or 90%



(Actual Size)

After consultation with our engineering staff and with the use of dies from our tremendous library maintained specifically to save our customers time and money, this part illustrated actually saved one manufacturer 90% of usual production costs!

Price breakdown was as follows:

Tools	$79.00
Labor	.059
Tapping	.016
Material	.0081

LOW die cost
FAST delivery
- Blanking
- Forming
- Piercing
- Drawing
- Extruding
- Stenciling
- Tapping
- Countersinking
- Plating
- Machining
- Painting
- Grinding
- Welding

Yes, WLS SPEEDTOOLING for small quantity stamping needs is a saver every time! A radical production advancement, it eliminates most of the cost required for permanent dies. Finished parts are produced to tolerances as close as those from tools costing ten times as much. When jobs are completed WLS SPEEDTOOLING is stored for future use.

Use WLS for production quantities up to 100,000 when low cost, fast delivery, possible design changes for virtually nothing, are important factors!

FREE
1. Write now for a free sample part with a cost summary.
2. Our free bulletin also illustrates 40 small stampings.
3. Send in your blueprints to our engineering department for a prompt quotation.

WLS STAMPING COMPANY
3287 E. 80th Street • Cleveland 4, Ohio

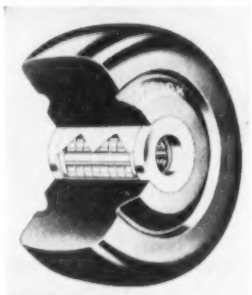
For more details circle NED-174 J7 on enclosed inquiry slip

SUPERVISORY CONTROL SYSTEMS use transistorized transmission

Up to 18 functions, telemetering and controlling, can be transmitted over a single pair of private or leased wires, carrier current, or radio or microwave mediums by means of transistorized audio-tone transmission in centralized supervisory control systems. It can be used to telemeter such quantities as pressure, temperature, level, flow, turbidity, pH and conductivity. Features of the transistorized plug-in power supplies, transmitters and receivers include ease of assembly, interchangeability, installation and system expansion. Units were developed in conjunction with and made by Warren Mfg. Co. for **Builders-Providence, Inc.**, 425 Harris Ave., Providence 1, R. I.

For more details circle NED-176 J7 on enclosed inquiry slip

CASTER WHEEL resists high impact, is nonmarking



Molded rubber composition truck caster wheel, now standard on Bassick casters, carries heavy loads, yet wears gradually without damaging floors. The Atlasite wheel, with a 50-per cent increase in impact strength over the former model, was developed by Firestone to be nonmarking and quiet in action. It is suited for all applications except high temperature and some acids. Made by **Bassick Co.**, Dept. N, 3045 Fairfield Ave., Bridgeport 5, Conn.

For more details circle NED-177 J7 on enclosed inquiry slip

MOISTURE ANALYZER checks content of solid materials

Quantitative determinations of moisture content of such materials as wood pulp, chicle, syrups, cotton, and cereals as well as tobacco, clay, soap, and plastic are made with this model 104 NMR moisture analyzer. Analysis is made in ½ to 4 minutes. Instrument uses principle of nuclear magnetic resonance. Representative 40-cc samples are unaltered and can be returned to stock. Legally-valid chart recording is made for each sample. Made by **Schlumberger Well Surveying Corp.**, Dept. N, Box 550, Ridgefield, Conn.

For more details circle NED-178 J7 on enclosed inquiry slip

HOLES COST LESS with ARO DRILLS

AUTOMATIC DRILLING at LOWEST COST . . . because it's ALL AIR operated!

SINGLE OR MULTIPLE SET-UPS . . . widest range of applications.

CHOICE OF 4 precision-made drills: Automatic, Par-A-matic, Bant-A-matic, Midg-A-matic.

WRITE for complete literature. See your Aro distributor.

THE ARO EQUIPMENT CORPORATION
GENERAL OFFICES—BRYAN, OHIO
Plants at Bryan and Cleveland, Ohio
Aro of California, 3141 S. Grand Ave., Los Angeles 7, Calif.
Aro Equipment of Canada, Ltd., Toronto 15, Ontario • Offices in All Principal Cities

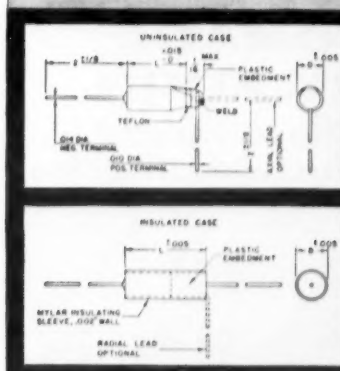
ARO AIR TOOLS
Also AIR HOISTS • LUBRICATION EQUIPMENT • AIRCRAFT PRODUCTS . . . GREASE FITTINGS

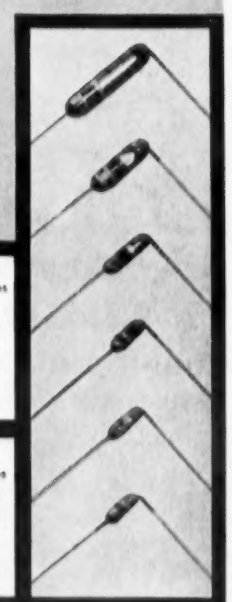
For more details circle NED-179 J7 on enclosed inquiry slip

NEW OHMITE®

TAN-O-MITE®

wire-type tantalum capacitors





SIZE	UNINSULATED D (inches)	UNINSULATED L (inches)	INSULATED D	INSULATED L
T	.075 (5/64)	.156 (5/32)	.082	.203
S	.075 (5/64)	.187 (3/16)	.082	.234
M	.095 (3/32)	.172 (11/64)	.100	.218
A	.095 (3/32)	.250 (1/4)	.100	.312
B	.125 (1/8)	.312 (5/16)	.134	.375
C	.125 (1/8)	.500 (1/2)	.134	.562

SERIES TW, SUBMINIATURE WIRE-TYPE TANTALUM CAPACITORS feature greater capacitance per unit volume, lower leakage current and power factor, and small capacitance drop at extremely low temperatures as compared to other types of electrolytics. Ultrasmall for low-voltage DC transistorized electronic equipment. Available in six subminiature sizes; 0.1 to 60 mfd. over-all capacitance range. Smallest size, .075 x .156 inches; largest, .125 x .500 inches. Five stock sizes in a wide range of capacitances and voltages. Write for Bulletin 148.

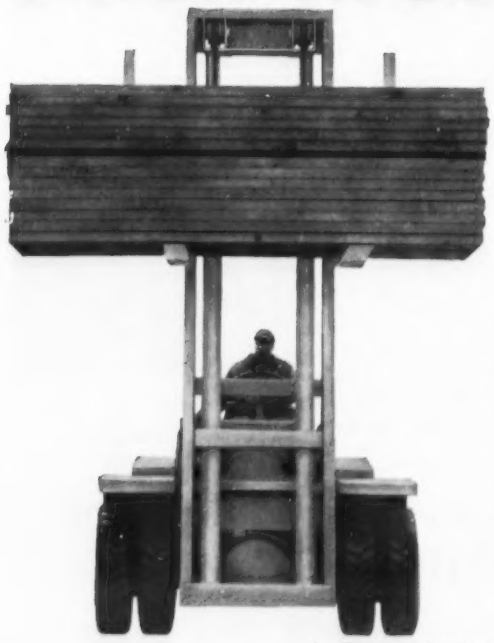
- HIGH STABILITY
- FOR − 55° C TO + 85° C
- HIGH CAPACITANCE
- SUBMINIATURE SIZES
- LONG SHELF LIFE

BE RIGHT WITH OHMITE®
RHEOSTATS • RESISTORS • RELAYS • TAP SWITCHES
TANTALUM CAPACITORS • VARIABLE TRANSFORMERS

OHMITE MANUFACTURING COMPANY
3620 Howard Street, Skokie, Illinois

For more details circle NED-180 J7 on enclosed inquiry slip

300% MORE VISIBILITY



WITH NEW YALE HIGH-CAPACITY GAS TRUCKS

Only new Yale 15,000-20,000 lb. capacity Gas Trucks offer you "Wide-Angle Vision"—Yale's exclusive feature that gives the driver 300% more forward visibility! Here's how: nested upright channels are wide-spaced to reduce frontal obstruction; hoisting cylinders are placed right next to channels ... lifting chains in front of the cylinders. The driver's seat is placed high and in the center of the truck. The result is not only full, unobstructed center visibility but also a greater arc of vision for fast, safe handling of big loads. Other outstanding features assure greater stability and fast cycle handling operations. Available with Fluid Coupling or standard transmission. Write for booklet No. 5230, The Yale & Towne Mfg. Co., Phila. 15, Pa., Dept. 379A

YALE* INDUSTRIAL LIFT TRUCKS AND HOISTS
*REG. U.S. PAT. OFF.

Gasoline, Electric & LP-Gas Industrial Lift Trucks • Worksavers Warehousers • Hand Trucks • Hand and Electric Hoists

For more details circle NED-175 J7 on enclosed inquiry slip

FERRO FILTER MAGNETIC SEPARATORS

Reduce Maintenance and Downtime of Hydraulic Equipment

Frantz FerroFilters keep hydraulic oils free from particles of iron, scale and rust which cause sticking and non-functioning of finely fitted valves and pistons. FerroFilter grids, strongly magnetized, grab and hold minute ferrous particles which would pass freely through edge-type strainers and even escape conventional cartridge-type filters. Write for BULLETIN PM-56.

Low Pressure FERRO-FILTERS 1" and under made this way

Other Low Pressure Models to 8" pipe size.

High Pressure models to 5000 psi also available

S. G. FRANTZ CO., Inc.

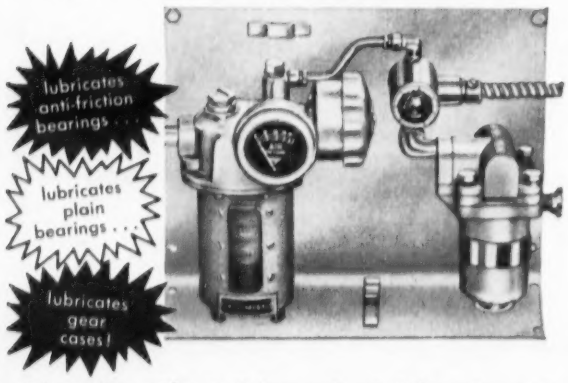
Brunswick Pike & Kline Ave.
P. O. Box 1138 Trenton 6, N. J.

For more details circle NED-181 J7 on enclosed inquiry slip

Foolproof protection for all moving parts! ALEMITE

AUTOMATIC LUBRICATION

can be easily designed into any new or installed machine!



Gives You These 8 Important Advantages!

1. **Continuous lubrication.** Deposits fresh, clean film of oil on all surfaces of all bearings.
2. **Fully automatic.** Starts and stops with operation of machine switch.
3. **No guesswork.** Bearings can't be overlooked, or overlubricated.
4. **Reduction of bearing temperatures.** Acts as bearing coolant. Reduces bearing temperatures as much as 20°F.
5. **Fewer types of oil.** Reduces number of oils that must be stocked, handled and applied.
6. **Elimination of downtime.** All bearings are constantly lubricated while machines continue to operate.
7. **Extension of bearing life.** Life of grinding machine bearings have been extended from 400 to 7,000 hours!
8. **As high as 90% less oil consumption.** Usually consumes about 1/10th amount used by any other oiling method.

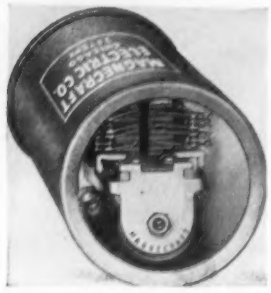
FREE! New Oil-Mist Catalog! Send for your copy today!

STEWART SW WARNER **ALEMITE**

Division of STEWART-WARNER CORPORATION
1850 Diversey Parkway, Chicago 14, Illinois

For more details circle NED-182 J7 on enclosed inquiry slip

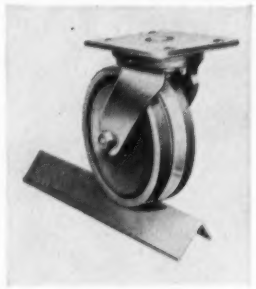
ENCLOSED RELAY has plastic observation window



Plastic observation window facilitates visual inspection of these metal-enclosed, dust-tight, plug-in relays. They are available for alternating and direct - current operation with contact combinations up to six-pole double-throw. Units can be supplied with contacts ranging from bifurcated (twin) type for switching extremely low voltage and current to power contacts rated 10 amp at 115 v ac, non-inductive load. Made by **Magnecraft Electric Co.,** 3350K W. Grand Ave., Chicago 51, Ill.

For more details circle NED-183 J7 on enclosed inquiry slip

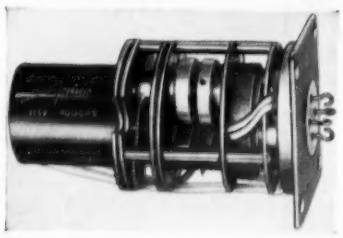
V-GROOVE CASTERS & WHEELS now include 4 to 10-in. diameters



Line of V-groove casters and wheels has been expanded to afford a broader range of sizes and capacities as standard, off-the-shelf items. Casters and wheels have a center-line V-groove which allows it to travel smoothly over inverted angle-iron floor or elevated tracking. They can also be used for general utility or floor travel without tracks. Diameters range from 4 to 10 in. with 1¾ to 3½-in. treads or faces and a choice of V-groove depths and widths to suit the need. Medium, heavy, and heavy duty casters, swivel or rigid, with plain, roller, or Timken bearings are offered in capacities from 500 to 15,000 lb. Made by **Albion Industries, Inc.,** Dept. NED, Plastic Rd., Albion, Mich.

For more details circle NED-184 J7 on enclosed inquiry slip

SUBMINIATURE TIMER for 115 v ac and 28 v dc



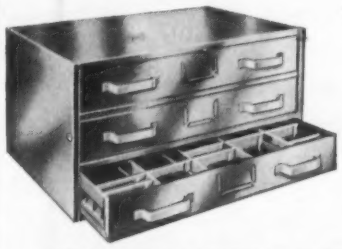
Only 1½ in. square and weighing 6 oz, this hermetically sealed subminiature timer has a mounting mechanism that is internally shock mounted. Types are available for 115 v 400 cycles, 115 v 60 cycles, and 28 v dc, and operate in a temperature of −55 to 125° C and to altitudes of 60,000 ft. Applications include repeat cycle, time delay, and sequence control. Made by **Advanced Products Co.,** 59 Broadway, North Haven, Conn.

For more details circle NED-185 J7 on enclosed inquiry slip

IMMEDIATE SHIPMENT

BAY SMALL PARTS CASE

BAY small parts cabinets and cases are ideal for use on benches, counters and in shelving for the storage of small parts. Drawers are slotted on 1" centers to permit quick arrangement for the accommodation of various quantities. Plated handle and label holder on front of each drawer. Back stops on drawers prevent them from dropping accidentally. Finished in baked green. Shipped one in a carton.



No. 2
SMALL PARTS CASE
Cabinet: 16¾" W. x 11¼" D. x 8¾" H.
3—Adjustable Compartment Drawers (16" W. x 11¼ L. x 2¼" H.)
60—No. D5 Dividers
72—Index Cards

$17.72

PRICES F. O. B. FACTORY OR WAREHOUSE PHILA.
COMPLETE SHOP BOX AND SHOP EQUIPMENT CATALOG ON REQUEST
PHONE: BAldwin 9-1805

BAY PRODUCTS INC.

3009 N. 16th Street, Philadelphia 32, Pa.

For more details circle NED-187 J7 on enclosed inquiry slip

FREE SAMPLE KIT PROVES BIG TIME SAVINGS!

SEMS-by-SHAKEPROOF

Tedious separate lock washer handling is completely eliminated. Specially designed SHAKEPROOF* Lock Washers are **pre-assembled** to screws —two parts are handled as one! Held on by the rolled thread, the washer can't drop off!

SEND FOR FREE TEST KIT NOW!

*T. M. REG. U. S. PAT. OFF.

SHAKEPROOF
"Fastening Headquarters"
St. Charles Road, Elgin, Illinois

SHAKEPROOF FASTEX DIVISIONS OF ILLINOIS TOOL WORKS

For more details circle NED-188 J7 on enclosed inquiry slip

Making picnic equipment is almost a "picnic" with DuPont Industrial Rivets

ONE MAN CAN quickly fasten the legs to this portable outdoor grill with Du Pont Blind Expansion Rivets. To increase production in a hurry, the only investment is in additional low-cost riveting irons.

"We keep our costs down on these portable outdoor grills with Du Pont Rivets," says Victor Roggio of Zenith Metal Products Company, Primos, Pennsylvania.

"Using Du Pont aluminum rivets to fasten the tubular legs to the grill, one man can do the job by himself. Bucking bars are eliminated and there's no need for refinishing after the rivets are set.

"On a seasonal item like this," continues Mr. Roggio, "we can increase production in a hurry without a heavy capital investment. Our only cost is the price of a riveting iron for each man we add to the line.

"No special skills are needed with Du Pont Rivets. Anyone can use them and do a good job. Just drill the holes, insert the rivets and apply the riveting iron.

"We're going to use Du Pont Rivets on more items in the future. Not only to keep production costs low, but also to make our designs simple and easy."

This is just one of the many applications where Du Pont Blind Expansion Rivets are effecting savings in time and manpower. Why don't you give them a try? They are available in a wide variety of sizes, types and metals. For more information, contact your jobber or write to E. I. du Pont de Nemours & Co. (Inc.), Explosives Dept., 2543 Nemours Building, Wilmington 98, Delaware.

EASY TO USE, just insert the Du Pont Rivets and apply the riveting iron. No bucking bars, no refinishing required.

DU PONT INDUSTRIAL BLIND EXPANSION RIVETS

DU PONT *A Product of Du Pont Research*

Better Things for Better Living . . . through Chemistry

For more details circle NED-186 J7 on enclosed inquiry slip

ELECTRAN

Multi-Purpose Step-Down TRANSFORMERS

. . . one transformer or a HUNDRED

Same day delivery from our stock. From 0.1 to 5.0 K.V.A. Ten standard types plus special variations to meet your specific conditions. A transformer you can depend on from a maker you can depend on!

(We have never yet been notified of a field failure of any of these units unless overloaded or otherwise incorrectly used.)

Write for bulletin 47D

ELECTRAN MFG. CO.
1901 CLYBOURN AVENUE • CHICAGO 14, ILLINOIS

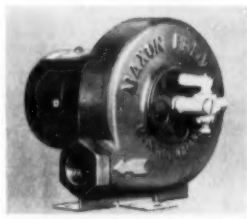
For more details circle NED-189 J7 on enclosed inquiry slip

LUBRICANT SPRAYER
combines 5-gal container, spray gun

Production spraying of Micro-Moly molybdenum disulphide lubricant is made possible by this spraying ensemble consisting of a self-pressurized 5-gal container complete with spray gun and 9 ft of hose. Gun has long nozzle for ease in reaching difficult locations and a pistol-grip handle. Trigger action is adjustable to govern rate of discharge and spray pattern. The volatile carrier for the dry film lubricant is nontoxic, noninflammable, and noncorrosive. Made by **Tower Oil Co.**, 300 W. Washington St., Chicago 3, Ill.

For more details circle NED-192 J7 on enclosed inquiry slip

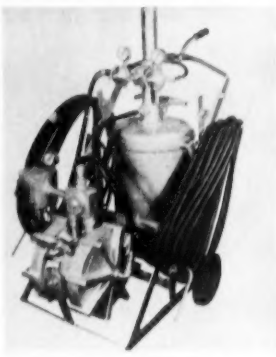
SMALL PREMIX BURNER
for heating or pilot applications



Available with a capacity range of 50,000 to 150,000 Btu per hour, this series M miniature Premix gas burner is designed for small industrial and commercial heating applications and for pilot service on larger gas burners. Firing can be continuous at a fixed rate or on-off with any clean fuel gas. Blower-mixer produces an air-gas ratio of predetermined proportions, is adjustable, and delivers mixture under pressure to a nozzle for ignition. Made by **Maxon Premix Burner Co.**, Dept. 1, Muncie, Ind.

For more details circle NED-193 J7 on enclosed inquiry slip

HOT PAINT SPRAY UNIT
portable, combines heater and pump



Self - contained Chieftain series combines a hot spray heater and reciprocating pump in a portable unit which carries the original 5 or 10-gal paint container. It is especially usable for industrial and maintenance spray painting. Capacity is ample to provide hot spray temperatures for one or two guns and on hose lines up to 75 ft in length. UL-approved 2 or 3-kw heater affords paint temperature control by simply setting the Dial-a-Matic dial. It requires only connection to air and electricity source and will spray up to 1 gpm of hot paint. Made by **Spee-Flo Co.**, Dept. NED, 720 Polk Ave., Houston 2, Tex.

For more details circle NED-194 J7 on enclosed inquiry slip

Plastics EXTRUSIONS by CONNEAUT

The Conneaut Rubber And Plastics Company is equipped to handle your requirements for almost any cross section in extruded Polyethylene and Vinyls. Where needed, we formulate special compounds in our own laboratories to meet your special applications. Complete die-making facilities in our own plant enable us to obtain extremely close tolerances . . . meet specifications exactly. Send us your blue prints for our quotations . . . or your problem for analysis and recommendations.

SEND FOR FREE, ILLUSTRATED FOLDER

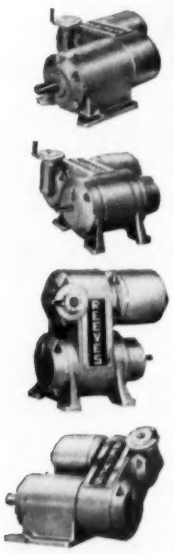
Contains complete details on Conneaut's custom service on plastics compounding and extruding. 102-D

THE CONNEAUT RUBBER AND PLASTICS COMPANY
CONNEAUT, OHIO

For more details circle NED-196 J7 on enclosed inquiry slip

NEW!

REEVES® Vari-Speed MOTODRIVES
Sizes 200-300 for 1-5 hp.



• Hundreds of space-saving, space-fitting *standard* assemblies. Available in "c" flow or "z" flow models, the new sizes are versatile additions to the full line (1-40 hp.) of REEVES Motodrives.

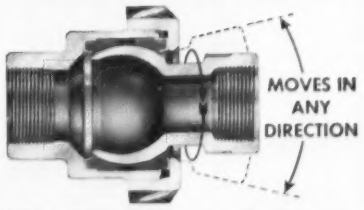
Write for your free copy of new catalog—Dept. ND33a-M571.

REEVES PULLEY COMPANY
Division of RELIANCE Electric & Engineering Co.
COLUMBUS, INDIANA

For more details circle NED-190 J7 on enclosed inquiry slip

BARCO *Flexible* BALL JOINTS

—when you need movable joints in piping handling



STEAM, OIL, CHEMICALS

Send for New Bulletin No. 215B

- Provides for movement in piping—up to 40° side flexibility, plus 360° rotating movement.
- Stainless steel and chemically inert gaskets for strong chemicals. No metal-to-metal contact. Choice of body materials.
- One Barco Ball Joint does the work of two or more ordinary swivel joints because "it moves in any direction!"
- Many models available. For pressures to 4,500 psi; temperatures to 1000°F. 15 different sizes. ¼" to 12". *Ask for recommendations.* BARCO MFG. CO., 530-K Hough St., Barrington, Illinois.

THE ONLY TRULY COMPLETE LINE OF FLEXIBLE BALL, SWIVEL, SWING AND REVOLVING JOINTS

For more details circle NED-191 J7 on enclosed inquiry slip

THE *NEW* REZNOR

is the only GAS UNIT HEATER with ALL these advantages

- Clean, modern design, back as well as front . . . all controls and connections inside the cabinet.
- FlexiTemp control system with automatic two-speed fan control to provide nearly continuous air circulation and minimize temperature fluctuation (optional).
- No costly frills and gadgets . . . features which are needed only to meet special situations always separately listed and priced.
- Winter/summer switch with convenient pull cord for operation of fan alone during hot weather.
- Fan or blower models in ten sizes from 25 to 300 thousand BTU.

Write today for free catalog GN-57.

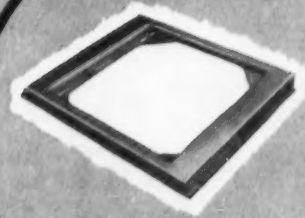
REZNOR
WORLD'S LARGEST-SELLING DIRECT-FIRED UNIT HEATERS
Reznor Manufacturing Company, 41 Union Street, Mercer Pennsylvania

For more details circle NED-195 J7 on enclosed inquiry slip

PENCO PALLET ROLLERS

SWIVEL and DOLLEY TYPES

2,000 LB. and 4,000 LB. CAPACITY



SIZES: 30" x 30" TO 48" x 48"

WRITE FOR ILLUSTRATED BULLETIN PR-3

PENCO ENGINEERING CO.
25 California Street, San Francisco 11

For more details circle NED-197 J7 on enclosed inquiry slip

Use Parker *Unipar* for sealing threaded joints

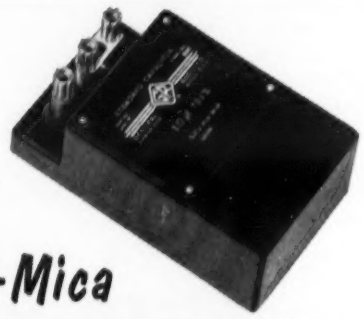
- Universal thread and gasket compound.
- Easy to apply. Lubricates and seals. Easy to disconnect.
- Seals water, steam, gas, oil, gasoline, etc.
- Extreme pressures; temperature range −70° to +300°F.
- Once you try it, you'll always use it.
- Call us for immediate delivery of Parker *Unipar*.

Parker
Hydraulic and fluid system components

Order from your Parker Distributor—or Rubber Products Division, Section 520-Q, The Parker Appliance Co., 17325 Euclid Ave., Cleveland 12, Ohio

▲ For more details circle NED-199 J7 on enclosed inquiry slip ▲

Even Better Silvered-Mica Standard Capacitors



Silvered Electrodes — eliminate flow of soft foil — area of electrode much more stable — much better contact between mica and electrode

No Impregnants to change with time and temperature

Residual Moisture absorbed by silica gel sealed in case

Accurate Adjustment — within ±0.1% of nominal value engraved on case

Calibration Certificate shows value for 2- and 3-terminal connections at specified temperature. Calibration to better than 0.01% by direct comparison with capacitance standard certified by NBS to accuracy of ±0.03%.

Temperature Coefficient — +35 ±10 ppm per Deg. C. between 10° and 70°C.

Ten Models Stocked — values between 0.001 and 1.0 microfarad

Type 1409 Standard Capacitors: $32 to $130.

GENERAL RADIO Company

275 Massachusetts Avenue, Cambridge 39, Massachusetts, U. S. A.

Broad Avenue at Linden, Ridgefield, N. J. NEW YORK AREA 1000 N. Seward St. LOS ANGELES 38
8055 13th St. Silver Spring, Md. WASHINGTON, D. C. 1150 York Road, Abington, Pa. PHILADELPHIA
1182 Los Altos Ave., Los Altos, Calif. SAN FRANCISCO 6605 W. North Ave., Oak Park, Ill. CHICAGO
In CANADA: 99 Floral Parkway, TORONTO 15

▲ For more details circle NED-200 J7 on enclosed inquiry slip ▲

SOLIDS–LIQUID SEPARATION

A new, economical approach to solids-liquid separation and solids classification in a liquid medium

by

B. KAHANE, P. Eng.
Separator Engineering Ltd.
Montreal, Quebec

Reprinted from

CANADIAN CHEMICAL PROCESSING

September 1956

Many technical and operating executives in the process industries have asked for this significant article. Write for your complimentary copy. It's Bulletin S-101-175.

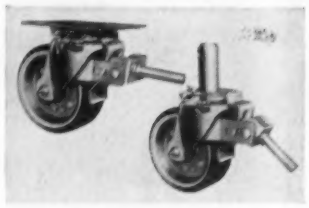
SWECO SEPARATORS

SOUTHWESTERN ENGINEERING COMPANY
4800 Santa Fe Ave., Los Angeles 58
LUdlow 3-6262—Cable: SWECOLA

Engineers and Constructors . . . Manufacturers

▲ For more details circle NED-201 J7 on enclosed inquiry slip ▲

BRAKE-EQUIPPED CASTER swivel and wheel action are locked



Made expressly for use on scaffolds, platforms, floor trucks, and equipment holding workmen, series C900 swivel stem and CP900 swivel plate casters incorporate dual locks. They are available with drawn steel, semisteel, rubber tired, vulcanized, or Ruberex wheels in 5, 6, and 8-in. sizes, with load capacities from 240 to 650 lb per caster. They combine a double-bearing swivel design with simultaneous locking of both the swivel and wheel. Made by **Faultless Caster Corp.**, Dept. NED, 1521 N. Garvin St., Evansville, Ind.

▲ For more details circle NED-202 J7 on enclosed inquiry slip ▲

LIQUID LEVEL GAGE fits standard 55 or 30-gal drum

This See-level gage and faucet combination will fit any standard 55 or 30-gal drum. It consists of a tube connected to intake side of a drum faucet so that liquid rises in tube to the height of the liquid in the drum. Tubing is flexible, transparent plastic and is impervious to most acids, alkalies, and alcohols. It is adjustable to the size of the drum and is held firmly, but not sealed, by a retaining screw in the tube clamp. Made by **Wisconsin Hydraulics, Inc.**, 3166 N. 30th St., Milwaukee 16, Wis.

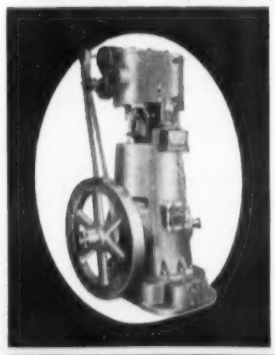
▲ For more details circle NED-203 J7 on enclosed inquiry slip ▲

VACUUM & PRESSURE GAGES available in several ranges

Accuracy, sensitivity, ease of installation, and readability are features of Accu-Vac absolute vacuum and pressure gages. They can be flush mounted on instrument panels or directly mounted in the line. Large, easily-read figures and graduations are employed on the 4-in. dial face. Protection is built-in against sudden pressure changes and corrosive gases. Accuracy is within 0.02 per cent, and ranges are 0 to 20, 0 to 40 and 0 to 760 mm of mercury absolute. These capsule dial gages are made by **Arthur F. Smith Co.**, Dept. A, 311 Alexander St., Rochester 4, N. Y.

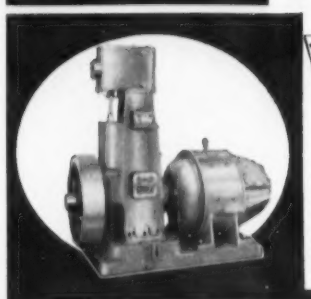
▲ For more details circle NED-204 J7 on enclosed inquiry slip ▲

STOP WASTING STEAM



USE TROY STEAM ENGINES

Convert wasted steam into low-cost power. Save dollars by producing "by-product" power from steam available for processing or heating. Install a modern Troy Type E Steam Engine 12½ to 100 hp. between boiler and process demand for power generation or to mechanically drive equipment.



TROY GENERATOR SETS

Complete units A.C. or D.C. vertical and horizontal. Capacities up to 60 KW and 94 KVA. Reduces costs for power by eliminating premium rates; essential source for stand-by power.

TROY Established 1870 Engine & Machine Co.
70 Parsons Street Troy, Pennsylvania Telephone: Troy 32

▲ For more details circle NED-205 J7 on enclosed inquiry slip ▲

IN CUTTING-OFF OPERATIONS

. . . speed without Accuracy is COSTLY!

Efficient cut-off of steel blanks from bars demands a combination of speed and accuracy. MARVEL and MARVEL alone achieves this combination with hack saw machines capable of delivering feeds and speeds which fully utilize the strength and heat resistance of the modern high speed hack saw blade.

Exclusive MARVEL dual power feed and crank lever method of reciprocation employed on the Series No. 6 and No. 9 Ball Bearing Hack Saw Machines provide increased speed and efficiency to the cut-off operation. Accuracy is assured by the construction of the machine itself.

MARVEL saws and blades form a team that guarantees the fastest, most accurate cutting-off combination.

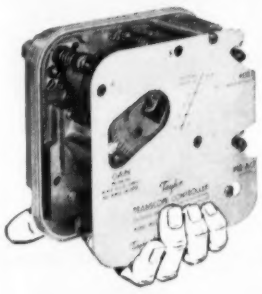
F5-1200

For further information send for catalog C55 and the name of your nearest MARVEL field engineer.

ARMSTRONG-BLUM MFG. CO.
5700 W. Bloomingdale Ave., Chicago 39, U.S.A.
Manufacturers of the Outstanding MARVEL Metal Saws

▲ For more details circle NED-206 J7 on enclosed inquiry slip ▲

NEW! the Ultimate in PNEUMATIC PROCESS CONTROL



Taylor TRANSCOPE* CONTROLLER

New in principle and design, and without equal in performance. Especially suited for short spans of measurement. Ideal for time constants of modern processing. Fast and responsive, with exceptional adaptability. Components completely interchangeable for converting in the field. Rugged, compact, simple to maintain. Write today for **Bulletin 98278** for complete details of the Taylor TRANSCOPE Controller. Taylor Instrument Companies, Rochester 1, N. Y., and Toronto, Canada.

*Trade Mark

Taylor Instruments MEAN ACCURACY FIRST

▲ For more details circle NED-207 J7 on enclosed inquiry slip ▲

AGASTAT

Compact . . . Dust-Proof TIME DELAY RELAYS solenoid actuated—pneumatically timed

Introduces time delays into a-c or d-c circuits. Easily adjusted to provide delays ranging from 0.1 second to five or more minutes.

The AGASTAT is small, light, and operates in any position. Dust-proof timing chamber assures long operating life with a minimum of maintenance.

AGA DIVISION

Address Dept. A15-95
Elastic Stop Nut Corporation of America
1027 Newark Avenue, Elizabeth, New Jersey

▲ For more details circle NED-208 J7 on enclosed inquiry slip ▲

6 NEW "PRODUCTION-BUILDERS" from benchmaster

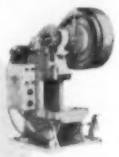
Here are latest expansions to the world-renowned line of Benchmaster tools. Write for descriptive literature today!

NEW BENCHMASTER 10 TON DEEP THROAT PRESSES Series 100

3 Shut heights: 7 to 13" depending upon stroke selected. 1¼" standard stroke, others available from 1½" to 3". 12" center of slide to frame.

BENCHMASTER 2 TON FIXED BED GAP FRAME PRESSES

4½" opening between columns for passage of wide foil or fast assembly jobs!



BENCHMASTER ELECTRO-MAGNETIC CLUTCH

Smooth, almost noiseless. No sliding keys, no breakage hazards. Instant pickup or disengagement at any part of stroke. Excellent for flying cut-off. Manual, foot, 2 button hand, remote or automatic operation, 110 V AC.

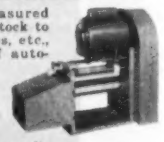
BENCHMASTER KOIL KRADLE – STRAIGHTENER

Koil Kradle supplies a slack loop from which any machine can freely draw. Vari-loop control eliminates constant motor stops and starts. Supplied separately or in Koil Kradle–Straightener combination illustrated.

Straightener is supplied in 9 or 11 roll models with or without magnetic clutch and brake. Equipped with pinch rolls. Roll widths up to 36". Other models specially built.

NEW BENCHMASTER AUTOMATIC MOTORIZED FEEDS

Supplies a measured length of flat stock to shears, presses, etc., then shuts off automatically. Can be re-triggered for automatic, repetitive operation. Rolls up to 36" wide, ⅛" thickness capacity.



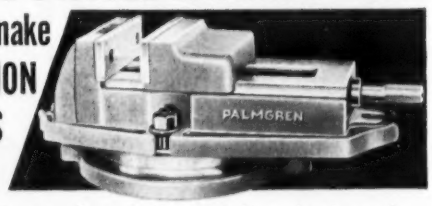
benchmaster

1835 W. Rosecrans, Gardena, California

▲ For more details circle NED-209 J7 on enclosed inquiry slip ▲

PALMGREN

Here's a SWIVEL MACHINE VISE that will make PRODUCTION PROFITS for You



On such jobs as milling, drilling, grinding, shaping and other machine operations that require a rugged holding device. These famous heavy duty vises are precision built, can be used with or without the 360° swivel base, come in 2 jaw sizes, and speed up production wherever they're used.

NO. 40 . . . 4" jaw, without base, **$69.95**
with swivel base, No. 40B, **$79.95**

NO. 60 . . . 6" jaw, without base, **$89.95**
with swivel base, No. 60B, **$99.95**

124

USED IN ALL INDUSTRIES . . . EVERYWHERE

There are 64 different models and types of Palmgren vises, rotary tables, milling attachments and other machine tool accessories, comprising the most complete line available anywhere, with jaw sizes from 1½" to 8".

Ask for FREE CATALOG No. 205, complete with full details and prices

CHICAGO TOOL and ENGINEERING CO.
8378 SOUTH CHICAGO AVE. • CHICAGO 17, ILLINOIS

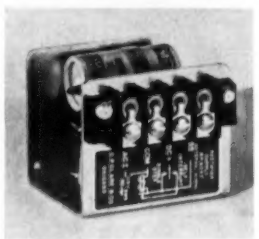
▲ For more details circle NED-210 J7 on enclosed inquiry slip ▲

PREDETERMINING COUNTER electric unit has automatic reset

Machine and process control and materials handling are applications for this electric predetermining counter, equipped with an automatic reset. It has five setting knobs which provide 100,000 possible control points. The electromagnetic counting unit permits use of such remote actuators as switches, contactors, and electric eyes. Accumulated counts can be visually monitored. The 2-second duration electric reset allows automatic recycling, automatic reset in preparation for the following cycle, or pushbutton reset. Maximum counting speed is 600 counts per minute. Made by **Veeder-Root Inc.**, Electronic Control Div., 19-P Sargeant St., Hartford 2, Conn.

▲ For more details circle NED-212 J7 on enclosed inquiry slip ▲

115-V RECTIFIER operates dc stepping switch



Either a single 115-v dc stepping switch or a group of switches can be operated one at a time by this rectifier for 115 v 60 cycles ac. Within its ratings, it may be used to operate a relay or group of relays. The 2 x 2¼ x 2 5/16-in. device can be mounted on either of two surfaces. A name plate shows external wiring connections. Made by **C. P. Clare & Co.**, 3101 Pratt Blvd., Chicago 45, Ill.

▲ For more details circle NED-213 J7 on enclosed inquiry slip ▲

SMALL OILER has positive-action pump lever

Lubrication of machines and equipment is simple matter with this inexpensive No. 58 Eaglet pump oiler. Suitable for tool box or bench use, it has lever-actuated pump which delivers any amount from a single drop of oil to a full stream. Made of copper coated steel, it holds 4 oz of oil and has a 3-in. rigid spout. Detachable cone-shaped grooved tip facilitates oiling. Price is 98 cents. Made by **Eagle Mfg. Co.**, 2545 Charles St., Wellsburg, W. Va.

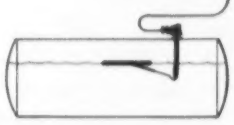
▲ For more details circle NED-214 J7 on enclosed inquiry slip ▲

100% AUTOMATIC TANK GAUGING

Dependable remote reading tank contents gauges using a closed hydraulic transmission system. No power required.

Several sizes available. Approved by Underwriters Laboratories and Factory Mutual. UL approved switches.

Write for complete details.



Since 1920 of proven quality

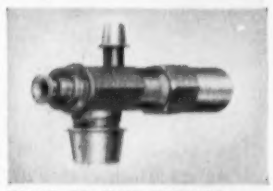
THE LIQUIDOMETER CORP.
LONG ISLAND CITY 1, NEW YORK

▲ For more details circle NED-215 J7 on enclosed inquiry slip ▲

which CaPlug will protect your product best?

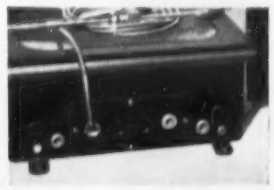
write for this free sample kit and see!

WANT TO SEAL OPENINGS IN A JIFFY?
Tapered (non-threaded) CaPlugs can be used as caps or plugs, inside and outside of threaded or plain fixtures. Just push them on . . . or push them in. Costing less to buy, these versatile closures cost less to apply. Time studies show that tapered CaPlugs save up to 500% in labor costs.



WANT TO KEEP FITTINGS UNDER WRAPS?
See how CaPlugs seal out dust and protect fittings of this refrigeration valve during shipment. Says Automatic Machine Products Sales Co., "CaPlugs are easy to install and afford the protection we desire." With ten standard styles stocked in over 500 sizes, CaPlugs are promptly available for nearly every closure need.

WANT TO PROTECT DELICATE THREADS?
Kiekhaefer Corp. guards the threads on the "Ride Guide" steering controls of its Mercury outboard motor with threaded style CaPlugs which the customer can reuse when storing motor. Made of tough, flexible Polyethylene, CaPlugs are kind to threads and polished surfaces — will not collapse, chip, break or shred.



WANT TO ADD SALES APPEAL?
Colorful CaPlugs spruce up your product and reflect the care you have taken to keep delicate systems free of dirt and moisture. This Bristol air control instrument is a good example. Says The Bristol Company, "They are sturdy enough so that they are not accidentally dislodged, but are still easily removable."

MAIL THIS COUPON FOR FREE CAPLUG SAMPLE KIT WITH DESCRIPTIVE LITERATURE AND PRICES

CAPLUGS DIVISION, PROTECTIVE CLOSURES CO., INC.
2209 Elmwood Ave., Buffalo 23, N. Y.

RUSH a free CaPlug sample kit, literature and prices to us, without obligation.

NAME TITLE
FIRM
ADDRESS
CITY ZONE STATE

▲ For more details circle NED-216 J7 on enclosed inquiry slip ▲

Here's how one Fork Truck can do the work of two With Clark's New TRIPLE STAGE UPRIGHT

One truck equipped with a Triple Stage Upright will do the work of two trucks . . . with uprights down, your *Clarklift* drives directly into rail cars or highway trucks . . . yet, when the three sections of the Triple Stage Upright are extended—you can stack as high as 18 feet.

The Triple Stage Upright was conceived, designed and developed by Clark Equipment Company and is available on Clark machines in 11 sizes with capacities of 3 to 5 thousand pounds.

For details and specifications simply circle the reader service card or write us direct.

Clarklift is a trademark of Clark Equipment Company

CLARK® EQUIPMENT

Industrial Truck Division
CLARK EQUIPMENT COMPANY
Battle Creek 21, Michigan

▲ For more details circle NED-211 J7 on enclosed inquiry slip ▲

Item: 22 x 8⅜" blank of 16 gauge steel . . . 4 operations . . . 3 inch depth of draw.

Item: 1" strip of 16 gauge steel drawn to 1/1000 inch tolerance on 14-station progressive die.

Item: 8½" blank of 18 gauge steel . . . 5 operations . . . 2 inch depth of draw.

Quadriga quality stampings are custom-manufactured; *any metal, medium to high quantity.* Depth of draw to 3½ inches . . . press capacities to 150 tons. Send b/p or specs for estimate...request catalog on your company letterhead.

THE Quadriga MFG. CO.

221 WEST GRAND AVE. • CHICAGO 10, ILL.

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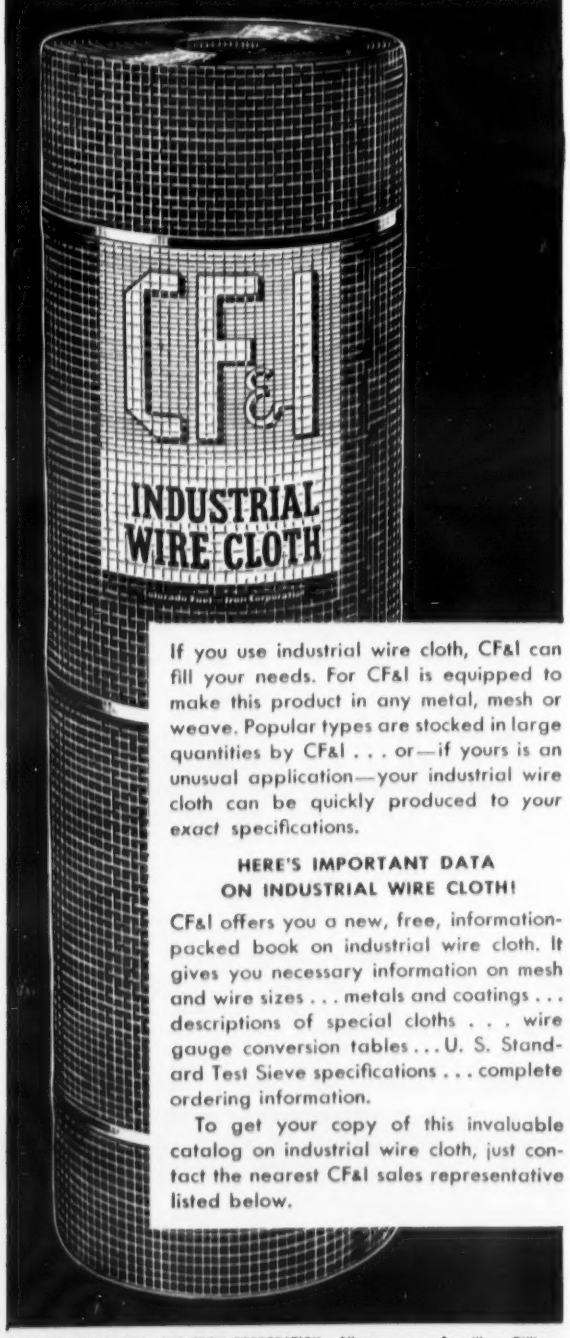
for SCREENING • FILTERING
FABRICATING • GRADING
CLEANING • PROCESSING



If you use industrial wire cloth, CF&I can fill your needs. For CF&I is equipped to make this product in any metal, mesh or weave. Popular types are stocked in large quantities by CF&I . . . or—if yours is an unusual application—your industrial wire cloth can be quickly produced to *your exact* specifications.

HERE'S IMPORTANT DATA ON INDUSTRIAL WIRE CLOTH!

CF&I offers you a new, free, information-packed book on industrial wire cloth. It gives you necessary information on mesh and wire sizes . . . metals and coatings . . . descriptions of special cloths . . . wire gauge conversion tables . . . U. S. Standard Test Sieve specifications . . . complete ordering information.

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THE COLORADO FUEL AND IRON CORPORATION—Albuquerque • Amarillo • Billings Boise • Butte • Casper • Denver • El Paso • Ft. Worth • Houston • Lincoln (Neb.) • Los Angeles • Oakland • Oklahoma City • Phoenix • Portland • Pueblo • Salt Lake City San Antonio • San Francisco • Seattle • Spokane • Wichita

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CF&I OFFICES IN CANADA: Montreal • Toronto 4459
CANADIAN REPRESENTATIVES AT: Edmonton • Vancouver • Winnipeg

▲ For more details circle NED-218 J7 on enclosed inquiry slip ▲

FREEZEPROOF ROTARY JOINT
handles 250-psi, 500° F at 1000 rpm

Suited for use on dryers, mills, presses and other rotating equipment, Exacto rotary joints cannot seize or freeze on the roll. They will operate efficiently on steam pressures up to 250 psi, with temperatures to 500° F and speeds to 1000 rpm. Flexible shaft alignment affords easy installation. Packless self-lubricating bearing surfaces offer minimum turning torque. Sealing members operate independently of the operating load. Sizes of ½ to 1½-in. are made in TF and S types. Distributed by **Phillips Sales Co.,** Box 417, West New York, N. J.

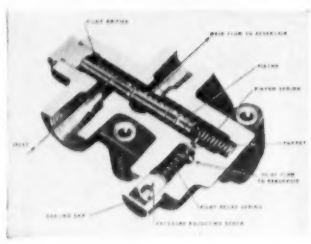
▲ For more details circle NED-219 J7 on enclosed inquiry slip ▲

PORTABLE BLOWER-HEATER
operates on LP-gas and electricity

Heating capacity of this model 1700 portable blower-heater can be adjusted from 10,000 to 120,000 Btu per hr. Usable indoors or outside, this LP-gas fired unit weighs only 30 lb. It draws 60 w and operates on 110-115-v 60-cycle ac. Safety controls include a safety shutoff solenoid valve, a thermocouple flame detector and relay that shuts off the gas in event of either power or flame failure. Regulating and control components are UL-approved. Made by **Insto-Gas Corp.,** Dept. NED, 998 E. Woodbridge Ave., Detroit 7, Mich.

▲ For more details circle NED-220 J7 on enclosed inquiry slip ▲

RELIEF VALVE
has 20-gpm maximum capacity



Instant reaction and clog-free, silent operation are advantages of this pilot-operated relief valve intended for use in hydraulic lift trucks and machine tools. Valve is said to allow about 40 per cent more work output than the average brute-force type valve. Large orifice which directs the sample of fluid to the relief valve reduces tendency to clog. Valve adjusts from 500 to 2000 psi and has maximum capacity of 20 gpm. Made by **Webster Electric Co.,** 1900 Clark St., Racine, Wis.

▲ For more details circle NED-221 J7 on enclosed inquiry slip ▲

6-IN-1 YARD MACHINE
performs function of 2½ ton crane, lift fork, bucket loader, dozer, car spotter and snow remover

The all-purpose, 6-in-1 Pettibone Speed Swing yard machine, with exclusive 180° boom swing and quickly changed attachments, eliminates the extra investment

required for several machines. The balanced frame and low center of gravity provide a high safety factor, especially for crane work. You'll value Speed Swing features: Torqmatic power-shift transmission, planetary axles, 3 forward and 3 reverse speeds, high flotation tires for off-pavement and over-track work, 2 or 4 wheel drive, 2 or 4 wheel steer, and optional heated cab. Ask for Bulletin P-264-N.

THE NEW YARD SENSATION PETTIBONE SPEED SWING

Pettibone Mulliken Corp., 4700 W. Division St., Chicago 51, Ill. • SPaulding 2-9300

▲ For more details circle NED-222 J7 on enclosed inquiry slip ▲

For Dependable Flow Control!

. . . use

DAVIS FLOAT VALVES

THE DAVIS NO. 60 FLOAT VALVE

ENGINEERS interested in working out efficient, trouble-free fluid level and flow control hookups will find a wide choice of units offered in the Davis line of float valves, float boxes, and fluid control valves.

For Float Valve dependability the Davis No. 60 is unexcelled. Here are a few of its outstanding features:

1. The Famous Davis Single-Seat Pilot Stem Valve! Tight-closing and non-sticking. Standard sizes will open against any pressure up to 125 lbs.
2. No internal packing! Disc renewable easily and economically. Hot or cold liquid at high or low pressure handled without hunting or water hammer.
3. Sizes 3" and smaller are all-brass valves. Larger sizes have semi-steel body, bronze bonnet, piston and trim. Globe or angle body patterns. Send for Bulletin 101-B.

Davis
DAVIS REGULATOR COMPANY

2531 South Washtenaw • Chicago 8, Illinois

▲ For more details circle NED-223 J7 on enclosed inquiry slip ▲

"FOOLPROOF" TANK WEIGHING WITH EMERY LOAD CELLS

'rolling ball' head

COUNTERACTS OFF-CENTER LOADING

The tank shown above is one of the simplest arrangements of an Emery Weighing System utilizing the new "Rolling Ball" Load Cell. It consists of one Emery Cell to support the front end of the tank and two Emery Ball Pivot Assemblies or some other support such as an "I" beam for the back of the tank.

The hydraulic pressure in the cell actuates an indicator, recorder or controller which is so calibrated that it reads directly the weight of the tank contents.

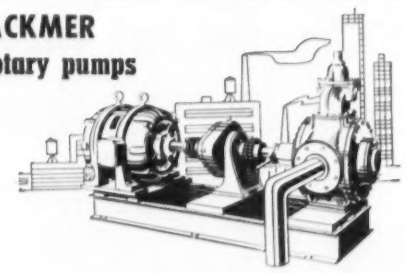
Note:
This arrangement is only one of fifteen discussed in our new Bulletin 561. If you have a tank weighing problem, send for Bulletin 561 today.

THE A. H. EMERY COMPANY

Pine Street • New Canaan, Connecticut

▲ For more details circle NED-224 J7 on enclosed inquiry slip ▲

BLACKMER rotary pumps



• *for sustained efficiency*
• *low maintenance*

"SELF-ADJUSTING for WEAR" VANE CONSTRUCTION assures sustained efficiency. Vanes can be replaced economically to restore "new pump" efficiency.

REPLACEABLE LINERS — Liner replacement is simple and eliminates the need for replacing the entire pump.

WIDE RANGE of APPLICATIONS — Blackmer Pumps are handling hundreds of liquids and semi-solids successfully. Power units for electric, gasoline, or diesel power, with capacities from 10 to 1500 GPM, for liquid pressures up to 125 psi, temperatures to 450° F.

BLACKMER PUMPS "liquid materials handling" equipment

BLACKMER

Industrial, Hand and Truck Pumps, Strainers, Pressure Control Valves
BLACKMER PUMP COMPANY, GRAND RAPIDS 9, MICH.
DIVISION SALES OFFICES — NEW YORK • ATLANTA • CHICAGO
GRAND RAPIDS • DALLAS • WASHINGTON • SAN FRANCISCO
See Yellow pages for your local sales representative

▲ For more details circle NED-225 J7 on enclosed inquiry slip ▲

"PARTNERS" WITH AUTOMATION

Speed production, eliminate inventory problems, reduce waste.

SEND FOR FREE ENGINEERING BULLETIN S-49

EATON RELIANCE DIVISION MANUFACTURING COMPANY 509 CHARLES AVENUE • MASSILLON, OHIO

SALES OFFICES: NEW YORK • CLEVELAND • DETROIT CHICAGO • ST. LOUIS • SAN FRANCISCO • LOS ANGELES

For more details circle NED-226 J7 on enclosed inquiry slip

CY-CO-TROL CUTTER GUARDS

safety maintenance of multiple tooth cutters

- PROTECTS OPERATORS HANDS
- PROTECTS CUTTER BLADES
- PROTECTS FINISHED PARTS OF MACHINE
- ELIMINATES costly applications of hot-dip plastic material directly to your cutters.

Cutter Guard holds to cutter by a spring pressure band to which segments are fastened and CUTTER GUARD UNIT IS COMPLETELY COATED WITH A TOUGH PLASTISOL MATERIAL which gives ultimate protection to cutter teeth. CY-CO-TROL CUTTER GUARDS are available for any size cutter, from 4" in diameter to 20" in diameter. Guards for cutters of larger diameters, guards for cut-off saws, or special shaped cutters can be supplied on special order.

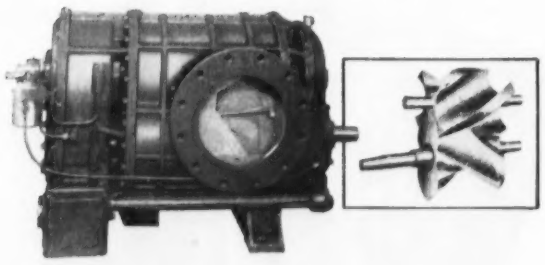
Write for Catalog

ROYAL design and manufacturing, inc.
4133 E. TEN MILE RD., CENTER LINE, MICHIGAN

For more details circle NED-227 J7 on enclosed inquiry slip

AXI-COMPRESSORS

formerly "Standardaire"



AIR, GAS OR VAPOR PROBLEMS?

If you are interested in compressor efficiency for handling air, gas or vapor, investigate the I-R AXI-COMPRESSOR line. With unique axial-flow cycloidal design, the rotors never touch . . . need no internal lubrication . . . deliver oil-free air. More air with less power consumption. Sizes range from 100 cfm to 15,000 cfm, for vacuums to 25 inches, pressures to 15 psi. Details in Bulletin 11,001.

Ingersoll-Rand
17-662 11 Broadway, New York 4, N. Y.

Over 1000 types and sizes of I-R compressors . . . 1/4 to 6000 hp.

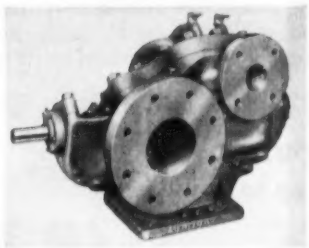
For more details circle NED-228 J7 on enclosed inquiry slip

FEED RATE INDICATOR
for use in setting machine tools

Accurate, instantaneous readings are provided by this feed rate indicator for setting hydraulic feeds on machine tools. Motion of a movable contact creates a signal which varies with rate of feed. This signal is indicated on a meter, calibrated in inches per minute. Feed rate ranges of 0-10 and 0-50 ipm are accurate within ±5 per cent. Other scales are available. Potentiometer operating rod has a permanent magnet which attaches to the movable member of the machine tool. Made by **National Automatic Tool Co.,** Dept. C, 715 S. N St., Richmond, Ind.

For more details circle NED-229 J7 on enclosed inquiry slip

CENTRIFUGAL PUMP
diagonally-split case eases servicing



Boiler feed service as well as hot or volatile liquid handling are applications for this line of diagonally-split case type AJ centrifugal pumps. Rotating element can be removed without disturbing the pump-motor-base alignment. Both suction and discharge are located in bottom half of casing, but above the centerline of the pump. They are self-venting and cannot vapor-lock. Usually bronze fitted, they can also be furnished all-iron or with stainless steel trim for high temperature conditions. Made by **New York Air Brake Co.,** Aurora Pump Div., 37 Dearborn St., Aurora, Ill.

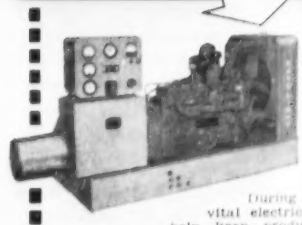
For more details circle NED-230 J7 on enclosed inquiry slip

SILICON RECTIFIER
for 110 v ac input, 90 v dc output

Full-wave rectification is provided by the 1Y silicon rectifier, a 4¾-in. high by 3-in. wide unit which can be mounted almost anywhere for operation of Stearns model GS electric clutches. High efficiency unit is suitable for 110-v ac input, 90-v dc output, with a 0.9-amp capacity. Made by **Stearns Electric Corp.,** Dept. A, 120 N. Broadway, Milwaukee 2, Wis.

For more details circle NED-231 J7 on enclosed inquiry slip

POWER FAILURES Eliminated!



with always dependable

Katolight STANDBY POWER

During power shut-downs you can keep vital electrically operated equipment functioning . . . help keep production underway with a Katolight Emergency Power Plant. Ruggedly built, Katolight Standby and Continuous Duty Units can be depended on to deliver more than their rated capacity . . . at surprisingly low cost. Sizes to 400 K.W., with engines of standard manufacture—diesel, gasoline, natural gas, propane, butane.

CUT COST . . . BOOST PRODUCTION WITH KATOLIGHT PORTABLE POWER ON THE JOB!

Now you can have plug-in power at your finger tips when and where you want it. Katolight Portable Generators give you quick, steady power for operating electric saws, grinders, drills, sanders, hammers, heaters, paint sprayers anywhere. Work speeds up . . . costs go down. No delays, no nuisance with power line hook-ups. 500 to 3500 watts and up. Available on dollies or trailers.

NEW FOLDER! WRITE FOR DETAILS TODAY!

A KATOLIGHT PLANT FOR EVERY NEED—INDUSTRIAL, COMMERCIAL, INSTITUTIONAL AND MUNICIPAL!

KATOLIGHT CORPORATION BOX 891-76 MANKATO MINNESOTA

For more details circle NED-232 J7 on enclosed inquiry slip

R&M HOISTS • CRANES • WINCHES

LOW PRICE ELECTRIC CHAIN HOIST

capacities to 2000 lbs.
lifts up to 60 ft.
prices start at $207.00

Robbins & Myers quality throughout, JC chain hoists are available from stock now, at new low prices! Features include: Special R & M hoist motor—Unit cast aluminum frame—Weston-type load brake—Sealed bearings throughout—Welded alloy steel link chain—Forged steel hook—Speed choice 34, 17, or 9 f.p.m.—Pendent rope control—Hook or trolley mounting. Write for Bulletin No. 852-B.

take it up with ROBBINS & MYERS, INC.
SPRINGFIELD, OHIO BRANTFORD, ONTARIO

For more details circle NED-233 J7 on enclosed inquiry slip

TURNIT

Assures 50% LESS TURNOVER HERE where it really counts

TURNIT, makes *correct* rotation of diamond tools a simple effortless operation; saves 50% and more in diamond tool cost.

Now you can get a better wheel finish, closer work tolerance, longer wheel life and, at the same time, eliminate wheel glazing and minimize grinding wheel heat, cracks and fractures.

There is a TURNIT for almost every grinding application on all types and models of grinders. Whether you wish manual or automatic operation, internal or external installation call or write for recommendations.

For further information ask for your copy of the new Turnit bulletin.

J. K. Smit are also manufacturers of diamond tools, diamond wheels, diamond drill bits, diamond lapping compound and diamond powder.

J. K. SMIT & SONS, INC.
Murray Hill, N. J.
TORONTO • • • DETROIT

For more details circle NED-234 J7 on enclosed inquiry slip

READ any surface temperature with Alnor® PYROCON

Equipment...material...metallic or non-metallic...flat, curved... revolving or stationary—you can read every surface temperature accurately in less than 3 seconds!

Compact, complete in precision design, this rugged instrument assures highest standards of speed, accuracy and dependability.

Alnor Portable Pyrocons come in scale ranges to 2000° F., with thermocouples for every application. You'll find full details on the Pyrocon exactly suited to your operations in Bulletin 4257. Send for your copy now. Write: Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle St., Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

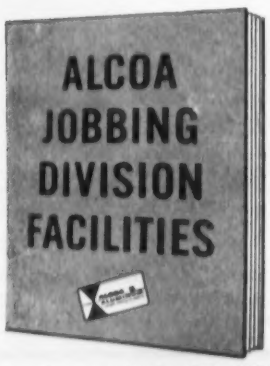
For more details circle NED-235 J7 on enclosed inquiry slip

We'll make it from ALUMINUM!

CONTAINERS

Also shipping drums, tote boxes, pallets, tanks. Process equipment. Welded tubing. Electronic cabinets. Farm gates. Floats. Phone booths.

Let Alcoa's Jobbing Division bid on your complex or long-run jobs in fabricated aluminum. We have the men, the machines, the technical know-how PLUS the help of Alcoa's giant research facilities. Let us solve your aluminum fabricating problems. Call your Alcoa sales office for more information on Alcoa's Jobbing Division.



FREE BOOK!

Describes equipment of Alcoa Jobbing Division. Shows kinds of jobs handled. 16 pages, easy reading, many pictures. Circle the Inquiry Card, or write: Aluminum Company of America, 1951-J Alcoa Bldg., Pittsburgh 19, Pa.

ALCOA ALUMINUM

For more details circle NED-236 J7 on enclosed inquiry slip

OVERHEAD SERVICING LIFT mounts on industrial lift trucks

Lighting fixture maintenance, servicing of overhead equipment, plant maintenance and construction are facilitated with this model 4-401 Hi-Ranger mobile extensible personnel lift. Mounted on any industrial fork lift truck, this device transports worker to overhead, recessed or below floor level locations. Position of personnel basket is under full control of operator by means of single 3-D control on side of basket. Accessories include lighting fixtures, electric power outlets, insulated booms and platforms and pressure-sensitive bars for stopping all movement. Maximum reach in any above-floor direction is 40 ft. Radial hydraulic outriggers improve stability. Unit can also be installed on trucks or other industrial vehicles. Made by **Mobile Aerial Towers, Inc.**, 1787 N. Harrison St., Ft. Wayne, Ind.

For more details circle NED-237 J7 on enclosed inquiry slip

THREE-WHEEL INDUSTRIAL TRUCK handles loads up to 3500 lb

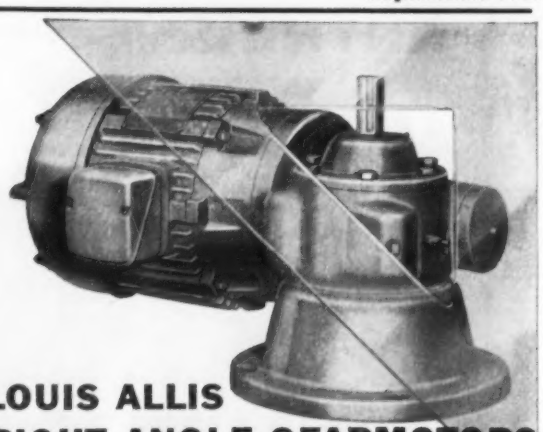
One man can load, drive and dump the Getman Scoot-Crete three-wheel industrial truck which will carry loads up to 3500 lb at 15 mph and climb grades up to 25 per cent. This compact unit has caster steering, heavy duty tires and an interchangeable platform, and will turn in its own length. Up to four forward and reverse speeds are available. Drive wheels are directly under load. Four models range in length from 70 to 103 in. and have capacities of 2000, 2500, 3000 and 3500 lb. The first two are powered by Wisconsin AEND 8.3-hp air cooled engines, while latter two can be powered by either a Wiscosin TFD 15-hp engine or a Deutz diesel engine made in West Germany. Made by **Getman Brothers**, Dept. NED, South Haven, Mich.

For more details circle NED-238 J7 on enclosed inquiry slip

Valves, Cocks & Gages

Roberts Brass Mfg. Co.—Air, compression, hose, shut-off and steam gage cocks; gas filters; hose nipples; water gages and accessories; and eight types of valves for appliances are illustrated and described in catalog 561. Specifications of each item are presented.

For more details circle NED-239 J7 on enclosed inquiry slip



LOUIS ALLIS RIGHT ANGLE GEARMOTORS —up to 30 hp!

Louis Allis right angle gearmotors are now available in sizes up to 30 hp, and in a wide range of enclosures and electrical characteristics.

Louis Allis offers you industry's widest selection of gearmotors: helical gearmotors, Line-O-Motor, and right angle worm gear motors for horizontal or vertical mounting.

Pick the gearmotor that exactly fits your need from the complete line of L-A motorized drives. Contact your Louis Allis District Office or the Louis Allis Co., 436 E. Stewart St., Milwaukee 1, Wisconsin.

LOUIS ALLIS

For more details circle NED-241 J7 on enclosed inquiry slip

THE *Right* KNIFE CLEARANCE FOR EVERY PLATE THICKNESS

It is simple, fast and easy to adjust the knife clearance on a Steelweld Pivoted-Blade Shear to suit every plate thickness. Only turn a crank and watch a dial. That's all there is to it.

Because of this quick, easy adjustment, every cut made on Steelweld Shears is the best cut possible — straight, smooth, accurate. And of importance, KNIVES REMAIN SHARPER FOR LONGER PERIODS

Built for thicknesses to 1 1/4 in. and for lengths to 18 feet.

STEELWELD Pivoted-Blade SHEARS CATALOG No 2011

Send for free Catalog No. 2011

THE CLEVELAND CRANE & ENGINEERING CO. 6616 East 282nd St., Wickliffe, O

STEELWELD SHEARS

For more details circle NED-242 J7 on enclosed inquiry slip

NEW Cyclo-trell Dust Collector

Here are a few brief facts on Research's new multiple tube mechanical collector. • Collection efficiencies are higher, for a given pressure drop, than other conventional multiple tube collectors. • Gas flow per tube is higher than conventional units. This means fewer tubes per collector and lower total cost for a given capacity.

Higher Collection Efficiency

After testing many types and curvatures of vanes, Research found that this new aerodynamic design resulted in less turbulence, greater centrifugal force and higher collection efficiencies.

Greater Gas Handling Capacity

To develop a higher gas flow capacity than other multiple tube collectors, Research's engineers developed the following design features:

First, by using a 10" diameter inlet tube, instead of the conventional 9" tube, the flow of incoming gas was increased. The next step was to straighten the gas flow as it entered the outlet tube, since a spiraling gas stream creates more resistance than a straight through flow. In the Cyclo-trell this spiral is eliminated, and energy is recovered in the outlet tube by the Outlet Recovery Vanes. By positioning these vanes below the tube, rather than inside the tube, resistance has been further reduced.

This combination of features means greater gas flow per tube, fewer tubes per collector and a lower total cost for a given capacity and efficiency.

Bulletin M gives complete details on design features, efficiency, capacity and detailed dimensional drawings. Write for your copy today.

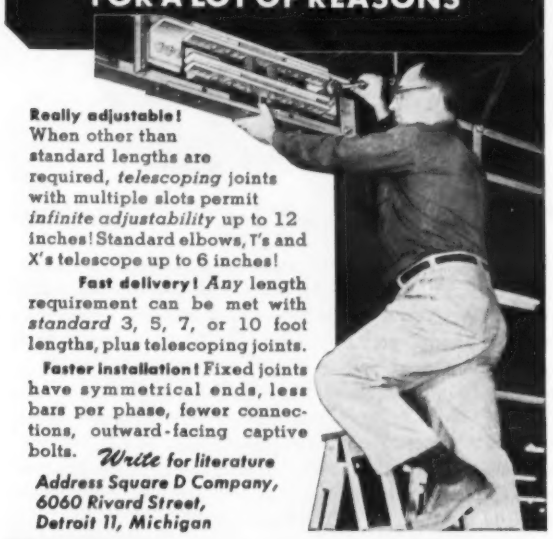
Research-Cottrell, Inc.

Main Office and Plant: Bound Brook, N. J. • 405 Lexington Ave., New York 17, N. Y. • Grant Building, Pittsburgh 19, Pa. • 228 North La Salle St., Chicago 1, Ill. • 111 Sutter Bldg., San Francisco 4, Cal.

RC 170

For more details circle NED-240 J7 on enclosed inquiry slip

SQUARE D's *New* ADJUSTABLE
ALUMINUM FEED-IN DUCT
FOR A LOT OF REASONS



Really adjustable! When other than standard lengths are required, *telescoping* joints with multiple slots permit *infinite adjustability* up to 12 inches! Standard elbows, T's and X's telescope up to 6 inches!

Fast delivery! *Any* length requirement can be met with *standard* 3, 5, 7, or 10 foot lengths, plus telescoping joints.

Faster installation! Fixed joints have symmetrical ends, less bars per phase, fewer connections, outward-facing captive bolts. *Write for literature*

Address Square D Company, 6060 Rivard Street, Detroit 11, Michigan

NOW...EC&M PRODUCTS ARE A PART OF THE SQUARE D LINE

SQUARE D COMPANY

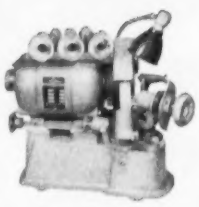
For more details circle NED-243 J7 on enclosed inquiry slip

SAVE DRILLS!

NOW PRECISION DRILL GRINDING BY ANY INEXPERIENCED WORKER!

FOR DRILLS UP TO ¾"...

The BLACK DIAMOND Drill Grinder restores **an old** drill to like-new precision sharpness . . . *in 10 seconds!* Any inexperienced man (or woman!) is an expert grinder with this unit. Both lips ground at once . . . web-thinning equally simple! Pays for itself many times over!



FOR DRILLS UP TO 2½"...

The WORCESTER Drill Grinder (now manufactured by Black Diamond) sharpens 2, 3, or 4-lip drills, flat, flat twisted or chucking, up to 2½". Clearances are easily and instantly changeable, feeding is controlled by micrometer adjustment

FREE BULLETIN

Get all the facts! 4 page illustrated bulletin gives complete story. *Write Today!*

BLACK DIAMOND

SAW & MACHINE WORKS 72 NORTH AVE. NATICK, MASS.

For more details circle NED-244 J7 on enclosed inquiry slip

FACTS about NEW DEPARTURE BALL BEARINGS

The Word *Versatile* Fits Like A Glove!

Fits because—this New Departure ball bearing carries radial loads and locates the shaft it supports against thrust loads from both directions! With snap ring, it eliminates inside housing shoulders, simplifies mounting.

With Sentri-Seal, it eliminates outside closure—protects against dirt! With two Sentri-Seals, this bearing eliminates need for lubricating fittings—requires no greasing!

It is a long-lived, non-separable unit that needs no devices for periodical adjustments.

NEW DEPARTURE

DIVISION OF GENERAL MOTORS • BRISTOL, CONN.

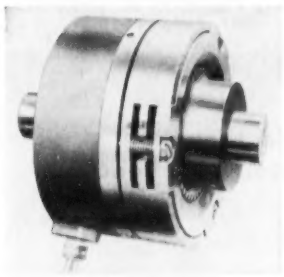
For more details circle NED-245 J7 on enclosed inquiry slip

VACUUM FURNACE for continuous use at 3992° F

Sintering, brazing, bright annealing and melting operations can be conducted in the model 420 vacuum furnace. Designed for continuous operation at 3992° F, it has a tantalum heating element and a sight tube through which optical pyrometer readings can be made without raising the cover. One-cabinet packaged unit has conveniently located controls. Made by **Richard D. Brew & Co.**, Vacuum Furnace Div., 474 Washington St., Wellesley 81, Mass.

For more details circle NED-246 J7 on enclosed inquiry slip

STATIONARY MAGNET CLUTCHES for wet and dry applications



Fast-acting GS and GSW electro-magnetic stationary magnet disk clutches provide smooth engagement and disengagement. They can be remotely or directly actuated with such automatic or manual controls as pushbuttons, limit switches, electric eyes or other devices. Clutches have direct magnetic action, plug-in electric connections and easily-adjusted, long-wearing linings. Adjustment screws also provide mechanical engagement in the event of power failure. Adaptable to many machine tools, they are offered in 4 to 9-in. diameters with slip torques from 9 to 540 lb-ft. Installation is on split shafts with keyways by means of set screws. Made by **Stearns Electric Corp.**, Dept. A, 120 N. Broadway, Milwaukee 2, Wis.

For more details circle NED-247 J7 on enclosed inquiry slip

HEX-HEAD CAP SCREWS have self-locking inserts

Stocked hexagon-head cap screws with Nylok self-locking inserts are available in ¼ to 1-in. diameters. Compressed between mating threads, the nylon pellet which makes the fasteners self-locking and self-sealing tends to recover its original shape when the screw is removed, permitting reuse. Locking action can be over a −70 to 250° F range. Pellet resists water, commercial solvents, alcohols, oil and boiling 40 per cent caustic soda. Made by **Cleveland Cap Screw Co.**, 4444 Lee Rd., Cleveland 28, O.

For more details circle NED-248 J7 on enclosed inquiry slip

IT'S **BRAND NEW**

Cleveland's RC-5 —a new quiet, light-duty electric vibrator

- It's quiet
- All electric
- Develops 275 lbs. of centrifugal force
- Operates on less than .5 amp. on 220 v.

Compact design for light duty on bins and hoppers, chutes, tubes, and other storage facilities for bulk materials. Prevents bridging, plugging and arching—eliminates processing delays.

WRITE FOR DETAILED INFORMATION AND PRICES.

Air or Electric

Portable or Permanent

Silent or Standard

THE CLEVELAND VIBRATOR CO.

2744 Clinton Avenue • Cleveland 13, Ohio

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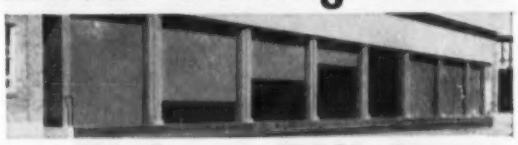
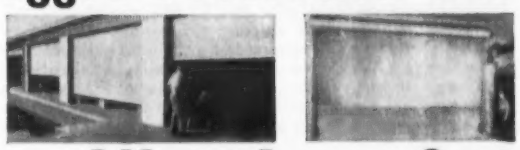
Kinnear Rolling Doors



For Highest Efficiency

Rugged Protection and



Long Life at Lower Cost

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FACTORIES: 3017 Fields Ave. Columbus 16, Ohio; 1742 Yosemite Avenue San Francisco 24, Calif.

For more details circle NED-250 J7 on enclosed inquiry slip

RAYMOND **HYDRAULIC EQUIPMENT**

PORTABLE ELEVATING TABLE

For die handling, feeding, positioning. Telescopic and Non-Telescopic Models. Cap. 2,000 lbs.

SHEET FEEDING TABLE

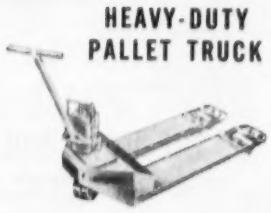
Keeps sheets, strips at right working level. Increases production, makes jobs safer, easier. Cap: 2,000 to 30,000 lbs.

RAYMOND

LIGHTWEIGHT PALLET TRUCK

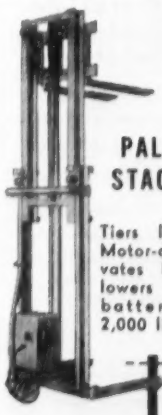
Rugged, maneuverable. 270° turning radius. Separate lift and lowering pedals. Cap: 2,000 lbs.

HEAVY-DUTY PALLET TRUCK



Handles your heavier loads. 360° turning radius. Finger-tip lowering. Cap: 4,000 or 6,000 lbs.

RAYMOND



PALLET STACKER

Tiers loads 115" high. Motor-driven pump elevates load, hand valve lowers it. Plug-in or battery-powered. Cap: 2,000 lbs.

SKID TRUCK

Sturdiest skid truck made! 360° turning radius. Finger-tip lowering. Cap: 2,500; 4,000 or 6,000 lbs.

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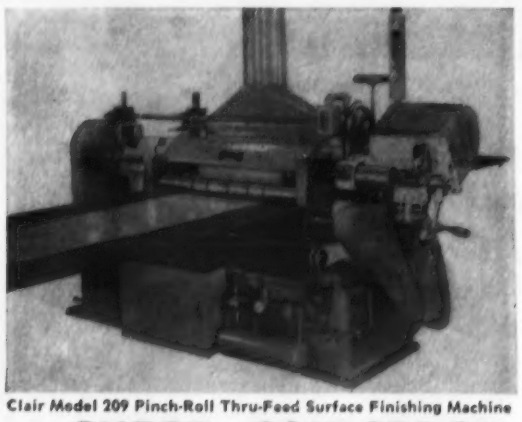
- ☐ Portable Elevating Table
- ☐ Lightweight Pallet Truck
- ☐ Pallet Stacker
- ☐ Sheet Feeding Table
- ☐ Heavy-Duty Pallet Truck
- ☐ Skid Truck

NAME TITLE
COMPANY
STREET
CITY STATE

For more details circle NED-251 J7 on enclosed inquiry slip



Clair Model 209 Pinch-Roll Thru-Feed Surface Finishing Machine

for SHEET or COIL STOCK

Incredibly versatile - - - the CLAIR model 209 will handle ANY type of surface finishing operation - - PLUS broadened applications for delusterization of transparent plastic film, printed circuitry applications, etc., etc. It will accommodate any type or kind of long sheet and continuous coil stock in metals, plastics - - - or whatever you have in mind for surface finishing.

CLAIR

For information on YOUR Surface Finishing Problem write, phone or wire.

MANUFACTURING CO., Inc., OLEAN, N.Y.

Offering the Most VERSATILE Line of Surface Finishing Machines

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FOR LUBRICATION APPLICATIONS IN THE "FRINGE AREA" . . .

specify **MOLYKOTE® LUBRICANTS**

Extreme pressure or boundary lubrication, without the participation of solid lubricants, is practically impossible.

This basic concept is the foundation upon which MOLYKOTE Lubricants have been built.

Whether we rely on solid lubricants which are already on the surface in the form of thin natural oxide films, or whether we take the necessary steps to introduce these solids on the surface or manufacture them with chemical additives, is immaterial.

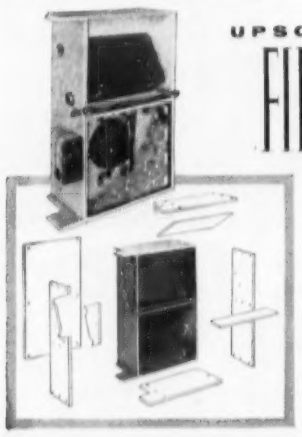
To improve on nature's own defensive solids by alloying or supplementing them with more highly qualified solid lubricants is the work of MOLYKOTE, Industry's Most Versatile Lubricant.

Send today for literature.

THE ALPHA MOLYKOTE CORP.

Main Factories: 65 Harvard Avenue, Stamford, Conn.
71 Arnulfstrasse, Munich 19, Germany

▲ For more details circle NED-253 J7 on enclosed inquiry slip ▲



UPSON ENGINEERED

FIBERBOARD

creates a waterproofed air conditioning cabinet

cuts condensation troubles, deadens sound, provides easy installation

The EJAY Remote Heat and Cool Unit, manufactured by EJAY Baseboard Manufacturing Company, Winsted, Conn., is a typical example of Upson Fiberboard Engineering. Its toughness and resiliency; superior finishing and sound deadening properties improve product quality. This Fiberboard cabinet actually solves condensate troubles usually found in metallic cabinets. Each part was delivered by us *ready for production*. Punched, beveled and die cut. UPSON FIBERBOARD could be *your* answer, too. Choice of lengths, widths, thicknesses and surface textures. *Send this coupon for our free idea booklet.*

UPSON

94% Wood Fibers Laminated for Great Strength

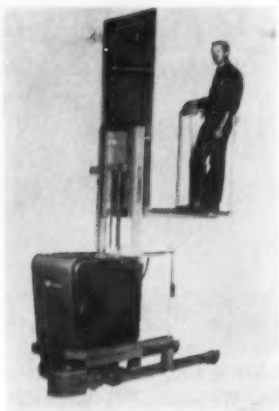
THE UPSON COMPANY, Industrial Division, 169 Upson Point, Lockport, N.Y.
Send me free idea booklet and sample kit.

UPSON

Name
Company
Position
Address Street City State

▲ For more details circle NED-254 J7 on enclosed inquiry slip ▲

MOBILE STOCK TRUCK
lifts stock clerk to shelf or bin



Filling of production or resale orders from warehouse stocks is facilitated with this Stock-Picker mobile truck. Machine transports and lifts clerk to desired shelf or bin from which he fills his order. It has ½-ton capacity and elevates up to 5 ft. Vehicle operates on two batteries, one for drive and one for lift, and has built-in charger. It has two-speed forward and reverse drives and is pushbutton controlled and steered from the platform. Steering locks when platform is raised. Truck can be equipped with horizontal guide wheels which ride against angle iron channelling on the aisle floor. Made by **Economy Engineering Co.,** 4513 W. Lake St., Chicago 24, Ill.

▲ For more details circle NED-255 J7 on enclosed inquiry slip ▲

TIME DELAY RELAY
affords adjustable recycling by means of calibrated dial heads

This model DED double head Agastat time delay relay provides for adjustable recycling, accomplished by its two-way action. Because of the two timing heads, a separate time delay can be set on each to allow an adjustable "on" and an adjustable "off" from 0.1 second to 15 minutes. Time delay occurs in upper portion immediately upon energization. At completion of the delay interval, a switch breaks one set of contacts and makes another, remaining this way as long as the control circuit is energized. Upon de-energization, the relay recycles slowly, depending on the time delay setting of the lower timing head.

Dial heads are calibrated for accurate adjustment, and one revolution of dial covers the complete range. Timing ranges available are 0.1 to 10 seconds, 0.1 to 30 seconds, 10 seconds to 3½ minutes and 30 seconds to 15 minutes. Two types are offered with single-pole double-throw double-break 15-amp contacts at 115-v 60-cycle ac, and with double-pole double-throw single-break contacts rated 8 amp per contact at 115-v 60-cycle resistive load. They are available for alternating and direct current operation from **Elastic Stop Nut Corp. of America,** A'G'A Div., 1020 Newark Ave., Elizabeth 3, N. J.

▲ For more details circle NED-256 J7 on enclosed inquiry slip ▲

Typical screw machine parts now being marked on the end face during machining cycle by series 900 automatic roll markers.

ELIMINATE SECONDARY END-FACE MARKING OPERATIONS

Save with New Method Automatic Roll Markers

New series 900 Automatic roll marker

Write today for Bulletin 900

- For screw machines and other multiple-station machines
- Flat or angular surface marking
- Extremely accurate—operate on same centers as part being machined.
- Mark any material to adjustable depths
- Standardized by proven performance

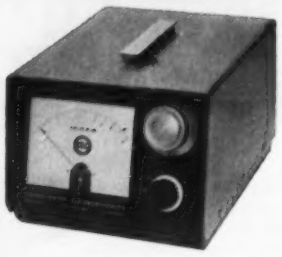
NMSS SINCE 1931

NEW METHOD STEEL STAMPS INC.

147 JOS. CAMPAU • DETROIT 7, MICH.

▲ For more details circle NED-257 J7 on enclosed inquiry slip ▲

CEC's Moisture Monitor



Measures one part in one million

Your ideal solution for any moisture problem is a portable, low-cost CEC Moisture Monitor. The 26-301, illustrated above, gives you accurate moisture measurement down to one part per million. Time response is extremely rapid. With a step function change in sample concentration from 750 ppm to 20 ppm water, the 26-301 will give *approximately 63% response in thirty seconds—95% response in one minute.* A meter calibrated in ppm by volume permits precise readings from 0 to 1000 ppm. Output can be telemetered to a remote recorder. Contact your nearby CEC field office, or write for Bulletin CEC 1834-X13.

Consolidated Electrodynamics

CEC *300 North Sierra Madre Villa, Pasadena, California*

OFFICES IN PRINCIPAL CITIES THROUGHOUT THE WORLD

▲ For more details circle NED-258 J7 on enclosed inquiry slip ▲

thanks to XEROGRAPHY...

IN JUST FOUR HOURS . . .
I had 10 letter-size copies each of 97 different engineering drawings . . . all as sharp as originals

"I'm flying to Paris tomorrow. These 24" x 36" drawings are too bulky to carry. I want ten 8½" x 11" copies of each so all will fit in my briefcase. There are 97 drawings . . . and each must be as clear and sharp in detail as the original. I'll need them in the morning."

It was 2 P.M. and the president of a large manufacturing company was issuing a directive to the manager of his Photographic and Reproduction Department.

Thanks to xerography, the dry, electrostatic copying process, the assignment was completed in four hours to the president's delight and amazement. Each 8½" x 11" copy delineated every detail of the 24" x 36" original drawing.

Unusual applications like this are possible only by xerography, the new dimension in paperwork duplicating. Xerography is a revolutionary copying development in this fast-moving age. Tasks that formerly required days or hours are now done in minutes and at a fraction of costs of other methods.

Even more spectacular are the day in and day out benefits of xerography. Multiple copies of an important management report, office form, engineering drawing, price list, etc., are made quickly and economically with masters prepared by xerography for offset duplicating.

Look to xerography for the solution of paperwork duplicating problems in all departments of your organization.

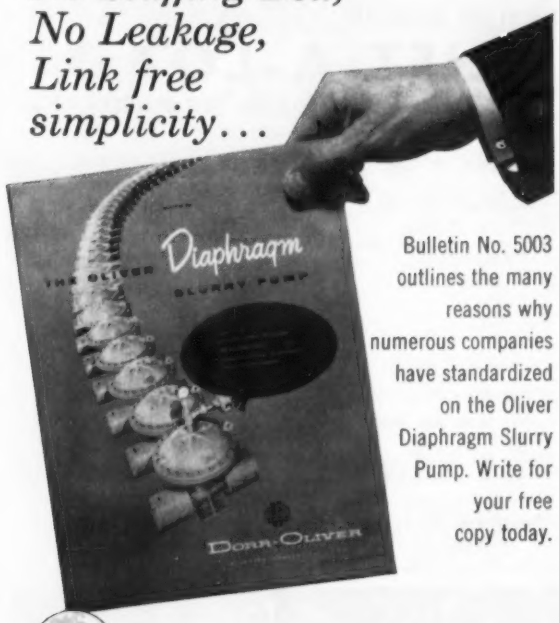
WRITE for "proof-of-performance" folders showing how xerography is saving time and thousands of dollars for companies of all types, large and small.

THE HALOID COMPANY
57-65X Haloid Street, Rochester 3, N. Y.
BRANCH OFFICES IN PRINCIPAL U. S. CITIES AND IN TORONTO

HALOID XEROX®

▲ For more details circle NED-259 J7 on enclosed inquiry slip ▲

No Stuffing Box, No Leakage, Link free simplicity...



Bulletin No. 5003 outlines the many reasons why numerous companies have standardized on the Oliver Diaphragm Slurry Pump. Write for your free copy today.

DORR-OLIVER INCORPORATED
WORLD-WIDE RESEARCH • ENGINEERING • EQUIPMENT
STAMFORD • CONNECTICUT • U.S.A.

For more details circle NED-260 J7 on enclosed inquiry slip

NEW LOW COST
NESTIER®
"GENERAL PURPOSE" BOXES AND BASKETS

Designed for
GREATER ECONOMY IN SMALL PARTS HANDLING

Completely redesigned, "General Purpose" materials handling boxes and baskets are priced one-third lower than other NesTier containers, yet incorporate all of their exclusive cost-cutting features. Empty units nest compactly . . . filled containers tier in rigid stacks. Available in five sizes, NesTier "General Purpose" boxes and baskets are pre-engineered for use throughout the plant.

Write today for literature. NESTIER

C-340 DN

THE CHAS. WM. DOEPKE MFG. CO., INC. 8884 Blue Ash Road, Rossoyne, Ohio

For more details circle NED-261 J7 on enclosed inquiry slip

a Rapistan® "transfer" idea

NEW LOW-COST TURN-TABLE MAKES 90° and 180° TRANSFERS IN MINIMUM SPACE

A pre-engineered, mass-produced unit, the Rapistan Powered Turn-Table provides a fast and effective low-cost method of transfer between different conveyor systems. Fits in floor space only 4 feet square. Adjustable from 22" to 38" in height. Handles packages up to 20" square, 18" x 22" or 14" x 24".

For complete construction and application details write today for Turn-Table Bulletin.

Another good handling idea from Rapistan

Rapistan
The RAPIDS-STANDARD CO., Inc.
94 Rapistan Building
Grand Rapids 2, Michigan

For more details circle NED-262 J7 on enclosed inquiry slip

VIBRATORY FEEDERS
trays produce uniform feed

High operating efficiency over broad operating ranges is feature of improved line of Hi-Vi electro-permanent magnetic vibratory feeders. Drive element is completely enclosed for protection against moisture, chemicals or foreign materials. Rectangular trays produce uniform feed. Compact base makes possible side-by-side, back-to-back or tandem installations. Operation is at 3600 cpm directly off an alternating current line. Three models provide controlled feeding of bulk materials at rates from ounces to tons per hour. Dry, hot, abrasive and lumpy materials of all types can be conveyed, spread, agitated, blended, cooled, dried or mixed in the feeders. Made by **Eriez Mfg. Co.**, 1325 E. Twelfth St., Erie 6, Pa.

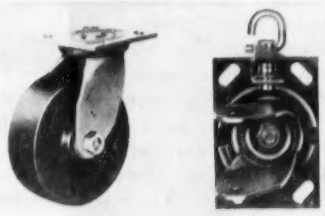
For more details circle NED-263 J7 on enclosed inquiry slip

SWIVEL HANGER RINGS
two types fasten three ways

Angular sided style with a 15/16-in. OD and a circle style with 1⅛-in. OD are available in line of ornamental and functional swivel hanger rings. They can have rivet lug, wood screw or tapped hole and any of a variety of finishes. Made by the Intercast method, they are used on picture frames, furniture, cabinet drawer pulls and mirrors. Made by **Gries Reproducer Corp.**, 143 Beechwood Ave., New Rochelle, N. Y.

For more details circle NED-264 J7 on enclosed inquiry slip

SEALED BEARING CASTERS
have a four-position swivel lock



Load capacity ranges of 140-800 and 590-1500 lb are available in line of heavy sealed bearing casters. Included are rigid and swivel models, the latter featuring a lock which will hold the swivel rigidly in any of four positions for temporary conversion to a swivel caster. Lock is disengaged by pulling out a ring and rotating the plunger to the desired notched seat on the retainer. Neoprene seals protect swivel and wheel bearings from entry of harmful materials. Made by **Colson Corp.**, 3704 Cedar St., Elyria, O.

For more details circle NED-265 J7 on enclosed inquiry slip

Cut Maintenance $600
yearly per unit with
WORLD Hand Dryers

Best By Test!
Factory Guaranteed!

THOUGHTFUL BUYERS USE WORLD!
Marshall Field & Co.
Northwestern University
Chrysler Corp.
Union Pacific Railroad
Libby-Owens-Ford
Frick Building
U. S. Army
U. S. Navy
Gimbel Brothers
Howard Johnson's
Alton, Ill. Schools
Pick Hotels
Gulf Oil

Each high speed WORLD Hand Dryer can save up to $600 per year on paper and maintenance . . . dry hands fast as towels . . . keep washroom clean and sanitary.

Prove it to yourself under our FREE trial offer! Full details on request.

WORLD

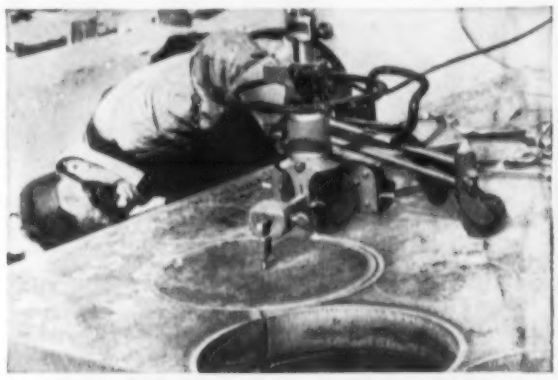
MAIL THIS COUPON NOW!

WORLD DRYER CORPORATION
616-22 W. Adams St., Chicago 6, Ill.

Gentlemen: Without obligation send me copies of letters from users, also folder of facts including cost-saving figures and full details on your FREE-TRIAL offer.

My name _____
Firm name _____
Street _____
City _____ State _____

For more details circle NED-266 J7 on enclosed inquiry slip



CUT METAL TO ANY SHAPE
with the OXWELD CM-16 Portable Cutting Machine

Tailor-make special parts, cut bevels, circles or complex patterns—you can handle all these jobs with the fully portable (40 lb.) CM-16. And you cut costs on all these jobs because mechanized flame cutting with the CM-16 boosts production speed and output and cuts gas consumption to the bone.

The CM-16 is only one of a complete selection of OXWELD cutting machines available for all your needs. Call your nearby LINDE Office today or write for OXWELD Cutting Machine Catalog-Form 4487.

LINDE COMPANY
30 East 42nd Street
New York 17, New York
DIVISION OF UNION CARBIDE CORPORATION

"Linde" and "Oxweld" are trade-marks of UCC

For more details circle NED-267 J7 on enclosed inquiry slip

Photo Courtesy Sandvik Steel, Inc., Fairlawn, New Jersey

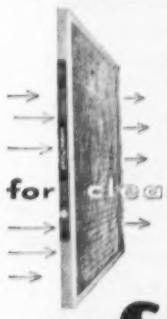
It cut his filter costs 70%

Probably your air filtering needs aren't anywhere near as critical as this manufacturer of fine watch springs. Every dust speck falling on a spring can absorb water—cause a rust spot. So the filters in his heating and air-conditioning system had to be replaced every 3 to 4 months.

Then he tried re-usable PLIOTRON filters—the first truly washable electrostatic air cleaner. *That cut filter use—slashed projected annual costs by 70%.*

And with PLIOTRON you get cleaner air. For PLIOTRON has a permanent electrostatic charge that captures up to 5 times as many fine dirt particles as ordinary filters. It's a depth-loader—using its entire depth to trap dirt and stretch the time between cleanings. And it lasts indefinitely, for it can be washed right out when dirty. No oiling's ever necessary.

Remember—there's a PLIOTRON filter to do a better, longer-lasting job in most any air-conditioning or forced-air heating system. See your PLIOTRON distributor—or write Goodyear, P. O. Box 288, Akron, Ohio.



for cleaner air everywhere—
PLIOTRON
AIR FILTER BY
GOODYEAR
THE GREATEST NAME IN RUBBER

Pliotron—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

For more details circle NED-268 J7 on enclosed inquiry slip

WHERE?

Where do you go for the *finest* fire warning equipment? To Kidde, for the dependable "Atmo" Fire Alarm System. Actuated by rate-of-temperature-rise at the first hot breath of fire, the system sounds an alarm. Main control box gives fire location. System operates independent of outside power sources. Self-supervising and self-resetting, Kidde-Atmo systems are custom-designed to fit your property. Write for the Kidde-Atmo Catalog I-4.

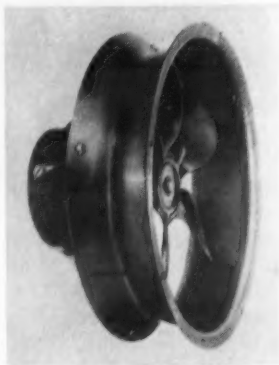
Kidde—Atmo
FIRE DETECTION

J. H. SCHARFF, INC.
924 Main Street, Orange, N. J.

A Subsidiary of
Walter Kidde & Company, Inc.

For more details circle NED-270 J7 on enclosed inquiry slip

AXIAL FLOW FAN
has venturi ring type mounting

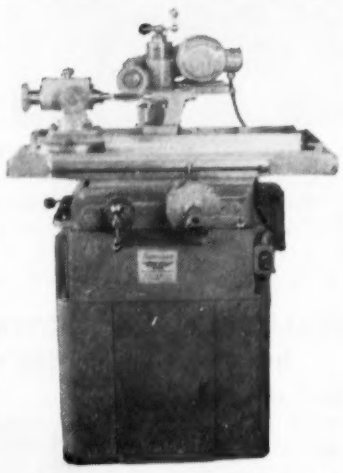


Series of 4, 8 and 10-in. axial flow, propeller type fans includes venturi ring for mounting directly against enclosures, cabinet walls or filter boxes. Available with motors for operation on practically any standard power, fans are matched to motor for static pressure conditions as required. Special designs can meet needs for various conditions of altitude or ambient temperatures. Illustrated 8-in. fan operates on 115-v 60-cycle ac and delivers 750 cfm of air. Fan, venturi mount and motor housing are lightweight aluminum, finished to suit application. Made by **Ashland Electric Products, Inc.**, Dept. A, 32-02 Queens Blvd., Long Island City 1, N.Y.

For more details circle NED-272 J7 on enclosed inquiry slip

TOOL & CUTTER GRINDER
offered with various attachments

Live work head, collets, four-jaw or universal chucks and special attachments for all types of grinding, including internal and external, are available for the M106-A tool and cutter grinder. Standard equipment includes 3½-in. saucer wheel and 6-in. grinder wheel, table with 5½ x 31-in. work surface, 8½ x 31-in. sub-table, two speed transmission and 24 x 30-in. cabinet with storage shelf. The 4½-in. column has a 360-degree swivel with 1-degree graduations. Table is calibrated to 15 degrees either side of center and swivels 225 degrees. Table travel is 15 in. and cross feed of 6¼ in. is at 0.125-in. per revolution. Vertical column movement is 7 in. Made by **Dependable Machine Co.**, 200 High Point Rd., Greensboro, N. C.



For more details circle NED-273 J7 on enclosed inquiry slip

Hardness Tester

Newage Industries, Inc.—Hardness of any size, shape or type of metal can be tested by the Newage portable hardness tester, described and illustrated in 4-page folder. Dial of 30-oz instrument produces direct readings. Design features are outlined.

For more details circle NED-274 J7 on enclosed inquiry slip

2000 lbs. of *LIFT* for $215.00

DAYTON ROGERS

LIFT-A-LOAD

***Portable elevating table* SHOP TRUCK**

The answer to your . . .
TOOL • DIE • MATERIAL HANDLING PROBLEMS

If you have to raise, lower or move a load, check these features:

- √ 3-Table working, storing surface
- √ Adjustable height
- √ 2 Elevating speeds
- √ Handles odd shapes
- √ 4-Post load stability
- √ Dependable floor lock
- √ Self-locking load screws
- √ Optional roller conveyor or angle-set top

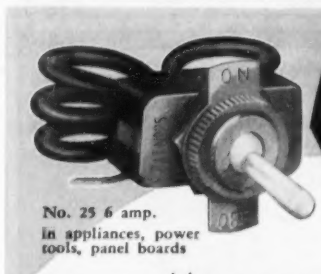
WRITE FOR LIFT-A-LOAD BULLETIN F-217

LIFT-A-LOAD SPECIFICATIONS
Height retracted: 24" Height elevated: 42"
Table top dimensions: 25" x 37"
Weight: 270 lbs. Wheels: 5" diam.

DAYTON ROGERS
Manufacturing Company

Minneapolis 7E, Minnesota

For more details circle NED-276 J7 on enclosed inquiry slip



IT PAYS TO USE TOP QUALITY TOGGLE SWITCHES

No. 25 6 amp. in appliances, power tools, panel boards

SPECIFY McGILL® *Levolier*®
TOGGLE SWITCHES

No. 90

No. 29

Available from Electrical Wholesalers

Top quality material, workmanship and the famous Levolier switch design assure you of years of trouble-free performance. Encased in molded phenolic, all Levolier toggle switches are dust and vibration-proof. The complete line offers a choice of wire leads, screw terminals, soldering lugs, or spade terminals on most models. It also includes momentary contact, single, two circuit and three-way models.

Send for Catalog No. 84

McGILL® ELECTRICAL SPECIALTIES

are always a little better and **ALL** *are Underwriters' Laboratories inspected*

McGILL MANUFACTURING CO., INC. 151 N. Campbell St. Valparaiso, Indiana

For more details circle NED-277 J7 on enclosed inquiry slip

a good policy for

BOILER INSURANCE

Yarway Remote Liquid Level Indicators protect your boilers by giving instant . . . accurate . . . continuous remote readings of boiler water levels anywhere in the boiler plant. No special liquids required. Compact installation . . . minimum space needed.

New "wide vision" face permits readings from any angle. Pointer always visible, even in the dark and at extreme high or low water levels. Hi-Lo signal alarms available. The best protection . . . proved beyond doubt by nearly 10,000 installations.

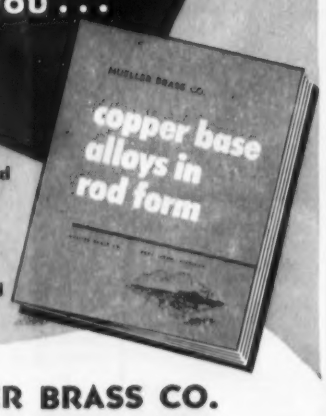
Write for Bulletin WC-1824.

YARNALL-WARING COMPANY
131 Mermaid Ave., Philadelphia 18, Pa.
BRANCH OFFICES IN PRINCIPAL CITIES

YARWAY REMOTE LIQUID LEVEL INDICATORS

For more details circle NED-271 J7 on enclosed inquiry slip

new RED TIP S-C* rod can cut costs for you . . .



"super-cutting" rod produced semi-continuously available only from the MUELLER BRASS CO. . . . send for complete manual

MUELLER BRASS CO.
PORT HURON 37, MICHIGAN

194

please send me a copy of your
ENGINEERING MANUAL FM-3010
NAME
COMPANY
ADDRESS

For more details circle NED-275 J7 on enclosed inquiry slip

LET US MAKE YOURS...

COILS
CLIPS
TERMINALS
CONNECTORS
from the material of your choice

and, of course, all types of springs, wire forms, small stampings
Send for booklet — "Spring Design and Selection — in brief."

ASSOCIATED SPRING CORPORATION

General Offices: **Bristol, Connecticut**

5713 © 1957 A.S.C.

For more details circle NED-278 J7 on enclosed inquiry slip

TRICO KLIPLOK CLAMPS FOR FUSE CLIPS

- Step Up Production
- Stop Heating and Arcing at Contacts
- Eliminate Burnt Fuses and Clips
- Prevent Fire and Accident Hazards

TRICO "Kliploks" lock fuses and clips together and assure smooth, easy flow of current. Easily and quickly installed . . . Low in cost . . . Pay for themselves many times over. There's a size and type for every fuse clip. Especially recommended for use with Dual-Element fuses.

Also Handy for:
• Cable Splicing • Tapping to Bus Bar • Drilling, Soldering, etc.

Write For Bul. No. 6

TRICO "Kliplok" TEST CLAMPS

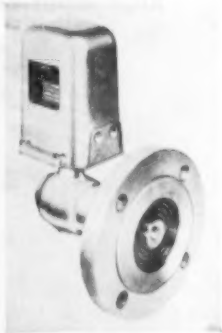
Handy for temporary connections. Clamp flat or round objects. Attached in a jiffy. 7 sizes 0 to 300 Amps.

Write For Bul. No. 7

TRICO FUSE MFG. CO. MILWAUKEE, WIS.

For more details circle NED-279 J7 on enclosed inquiry slip

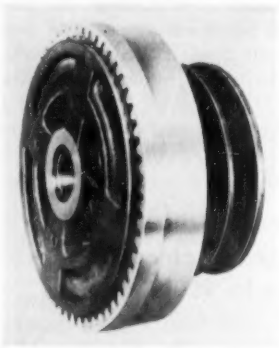
FLUID LEVEL TRANSMITTER for viscous or slurry type liquids



Mounted directly on a tank nozzle, this type 13 FA d/p Cell Transmitter provides a simple method for measuring level of viscous or slurry type liquids in open or closed vessels. The level measuring element is a silicone-filled diaphragm capsule and is assembled on a 3-in. flange for flush mounting on side of vessel. Pneumatic output of transmitter, a 3 to 15-psi signal proportional to tank level, will operate a remote indicator, recorder or controller. Wetted parts are 316 stainless steel. Made by **Foxboro Co.**, 26 Neponset Ave., Foxboro, Mass.

For more details circle NED-282 J7 on enclosed inquiry slip

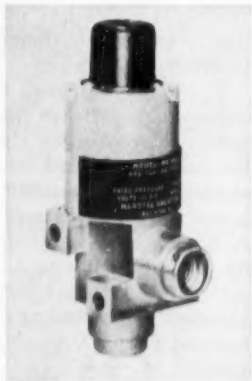
AUTOMATIC CLUTCH ventilating system is built in



Friction area of 40 sq in., large for its capacity range, is built into the 800 series automatic clutch for loads requiring extended acceleration periods. Heat is rapidly dissipated by a built-in ventilating system. Clutch is engineered for use on 2 to 5-hp 1750-rpm electric motors and 6 to 9-hp gasoline engines. It accommodates a variety of detachable sheaves for diverse applications. Made by **Salsbury Corp.**, Power Transmission Div., 1163 E. Florence Ave., Los Angeles 1, Calif.

For more details circle NED-283 J7 on enclosed inquiry slip

SOLENOID VALVE has no moving seals



Free of moving seals, the MV-126B miniature solenoid shut-off valve weighs only 6½ oz and has a low pressure drop. Unit is operated by a 24-v dc, 1-amp power supply at pressures from 0 to 500 psi and temperatures from −65 to 350° F. Flange, plug-in and line-mounted versions are suited to hydraulic, desiccator and steam systems. Made by **Marotta Valve Corp.**, 330-51 Boonton Ave., Boonton, N. J.

For more details circle NED-284 J7 on enclosed inquiry slip

COLONIAL CUTTING PADS

CUT COSTS FOUR WAYS

COLONIAL CUTTING PADS can save you money in four ways—

1. They reduce die wear and breakage
2. They reduce rejects
3. They're usable on both sides
4. They're returnable—after full use—for generous credit.

Made of tough, "self-healing," non-oxidizing TYGON plastic, COLONIAL Cutting Pads are clean, dustless, and long wearing. They reduce rejects caused by dirt and dust or by double cutting due to "bounce back." They are widely used in the accurate machine or hand die-cutting of rubber, leather, plastics, cork, candy, paper, fabrics, foils, or light gauge metals. Colors available are black and tan. Standard durometers are 87 to 97, or others on special order. 8 standard sizes range from 20"x20" to 40"x40" in area, and from ¼" to 1" in thickness.

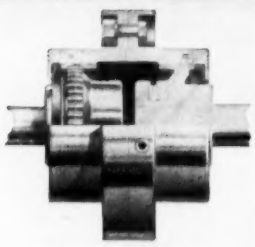
Write, right now, for full information and prices

310C-1

COLONIAL RUBBER CO.
RAVENNA, OHIO

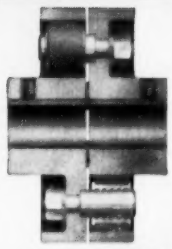
For more details circle NED-285 J7 on enclosed inquiry slip

It pays to Specify AJAX The World's Most Complete Line of FLEXIBLE COUPLINGS



AJAX DIHEDRAL COUPLINGS

AJAX Patented Dihedral tooth shape handles angular and offset misalignment up to 12 degrees.



AJAX RUBBER-BRONZE CUSHIONED COUPLINGS

Safeguard your machines against costly shutdowns. Standard of industry for 37 years. All types and sizes.

Write for Ajax Technical Catalogs. Representatives from coast to coast.

AJAX FLEXIBLE COUPLING CO. INC.
WESTFIELD, NEW YORK
Also manufacturers of Ajax vibrating conveyors, screens and packers.

For more details circle NED-280 J7 on enclosed inquiry slip

NEW...from WINSMITH SPEED REDUCERS

SHAFT MOUNTED WORM GEAR SPEED REDUCERS

SERIES "ST" Torque Arm Type

SERIES "SF" Flange Mounted Type

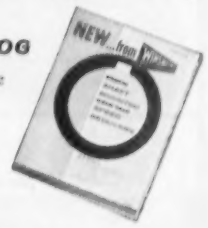
• Now you can specify Winsmith performance, dependability and economy for applications requiring a shaft mounted speed reducer.

The new Winsmith "ST" and "SF" series require less space than conventional models because they eliminate the need for couplings and bed plates. Both series are currently available in three sizes . . . in ratios from 7½:1 to 77:1 . . . horsepower from .63 to 8.82 . . .maximum output torque range from 816 to 7678 in. lbs.

These new shaft mounted models also embody all the advanced engineering and construction features that make Winsmith Speed Reducers first choice for any application from 1/100 to 85 h.p.

WRITE . . . FOR NEW CATALOG

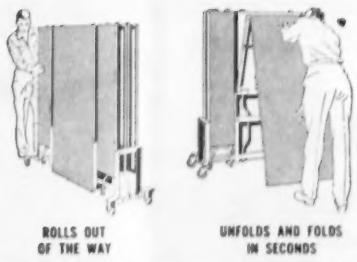
For all the facts and complete technical data on Winsmith Shaft Mounted, Worm Gear Speed Reducers, write today — on your company letterhead, please — for Catalog No. SM-57.



WINSMITH, INC.
119 Eaton Street, Springville, (Erie County), N. Y.

For more details circle NED-286 J7 on enclosed inquiry slip

Here's the answer to lunch period seating—Right in the department!



TRANSI-FOLD FOLDING TABLES AND BENCHES

These rugged, husky, compact units are in broad industrial use and proved practical in large and small plants. They store against the wall in minimum space in the department and set up in seconds in aisleways. Because of travel time, congestion and other complications central cafeterias are being abandoned in favor of mobile or area food service but fixed tables take up too much room. They are invariably used as storage surfaces, are unsanitary and never ready for use.

These folding tables and benches enable you to provide respectable seating and gain many economies in time and space. Understructures are welded steel. Warp-proof tops are 7-ply Ph. mahogany, surfaced with high-pressure laminated washable plastic with formed steel reinforcing bars. Edges are trimmed with permanently attached stainless steel. Write for folder.

SCHIEBER SALES COMPANY • DETROIT 39, MICHIGAN

For more details circle NED-281 J7 on enclosed inquiry slip

DOES THE WORK OF 4 DRILL PRESSES

FITS ALMOST ANY DRILL PRESS

DRILLS—REAMS
COUNTERSINKS
COUNTERBORES

quadrill

4 POSITION DRILLING & TAPPING TURRET HEAD

Saves Set-up Time • Saves Production Time

With Quadrill you can use four drilling or cutting tools on one drill press by simply indexing for each tool. Precision built for rugged duty—long service. Specify make and size of drill press when ordering QUADRILL.

CHICAGO QUADRILL Company
1856 BUSSE HIGHWAY · DES PLAINES, ILL.

For more details circle NED-287 J7 on enclosed inquiry slip

"SPOT the Light where you want it... LIGHT the Spot where you need it."

Adjustable SWIVELIER
COOLITES

PREVENT BURNS

STAY COOL
Using
100-Watt
Lamp

LOCKED-IN SPRING-TENSION PREVENTS DROPPING DOWN OR WORKING LOOSE.

"Never gets too hot to handle"

SWIVELIER FLUORESCENT
DEXTRA-LITES

Adjust to any position

For . . . desks, assembly tables, drafting boards, inspection tables, repair benches, etc.

Made with the
UNIQUE, SPRING-TENSION SWIVELIER SOCKET

UNIVERSALLY ADJUSTABLE
ANGLES 90° ROTATES 360°

"STAYS PUT . . . AT ANY ANGLE!"

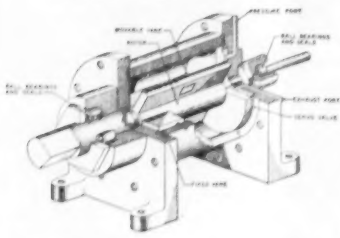
• ALL WIRES ENCLOSED

• For full details on Coolites, fluorescent and incandescent "Dextra-Lites" and other fine Swivelier Industrial Lighting Units
Write: Dept. NED 9 for Bulletin 134.

SWIVELIER COMPANY, Inc.
43—34th St., Brooklyn 32, N. Y.
Showroom: 30 Irving Place, New York, N. Y.

For more details circle NED-288 J7 on enclosed inquiry slip

ROTARY ACTUATORS
feature integral servo valve and high input-output torque ratios



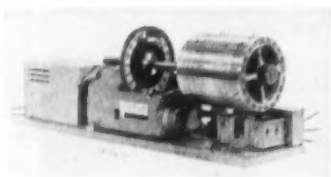
Output and input circuits of integral servo valve rotary actuators are hydraulically interrelated so that the output shaft always takes the position commanded by the input shaft. They utilize a small input torque in ounce-inches to control an output torque of thousands of foot-pounds. Input control shaft may be actuated mechanically or electrically.

Devices are composed of a rotating input shaft coupled to a slide type valve, and a rotating output shaft attached to a set of movable vanes. Models with one set of vanes move through a 270-degree arc. Addition of a second set of vanes doubles torque, but reduces arc to 95 degrees.

Output torques range from 7500 to 360,000 lb-in. at 1000-psi hydraulic pressure, according to the model. Speed of response is about 3 seconds per stroke at flows from 8 to 60 gpm. Torque amplification under optimum conditions is about 1500. Six available sizes range from 4 to 12 in. diameter by 2½ to 13 in. high. Made by **Industrial Control Products, Inc.**, Dept. N, 4 Clinton Rd., Caldwell, N. J.

For more details circle NED-289 J7 on enclosed inquiry slip

ADJUSTABLE PROGRAM TIMER
for cycling multistage circuits on time cycles up to 4000 seconds



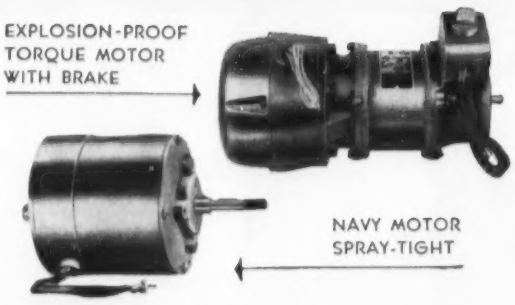
Continuous multistage circuit control is afforded by this adjustable program timer. Driven by a synchronous motor, it can be used for programming and recycling of complex switching patterns with respect to a time basis. Time cycle is adjustable over the entire range of the unit, and the accuracy of any intermediate switching points is unaffected by the length of the time cycle or their position in the cycle.

It can be furnished for any time cycle up to 4000 seconds, and range brackets are specified in 100-second increments. Cycle is adjustable in 1-second increments for half the time cycle and 2-second increments from one-half to the full range. Any selected switching pattern is recycled automatically and continues until shut off. Motor operates at 60 rpm on 115-v 60-cycle ac. Removable switch pins are inserted in holes in a helical-pattern program cylinder to actuate the sensing switches. Made by **Counter & Control Corp.**, Dept. N, 5213 W. Electric Ave., Milwaukee 14, Wis.

For more details circle NED-290 J7 on enclosed inquiry slip

IF STOCK MOTORS CUT MACHINE EFFICIENCY

EXPLOSION-PROOF TORQUE MOTOR WITH BRAKE



NAVY MOTOR SPRAY-TIGHT

Peerless builds a complete line of general purpose motors plus hundreds of specials for specific needs. Our engineers specialize in motor problems that require unusual mountings or construction to achieve maximum machine efficiency. Let us work with you on your problem. Write for Bulletin SDA-155. It tells how we help you.

Single Phase 1/2 to 7-1/2 HP Polyphase 1/2 to 30 HP

ELECTRIC MOTOR DIVISION
THE Peerless-Electric® COMPANY
FANS • BLOWERS • MOTORS • ELECTRONIC EQUIPMENT
1506 W. MARKET ST. • WARREN, OHIO

For more details circle NED-291 J7 on enclosed inquiry slip

efficient and fast . . .
ELLIOTT
BOILER TUBE
EXPANDERS

for boiler tubes ¾ in. I.D. and up

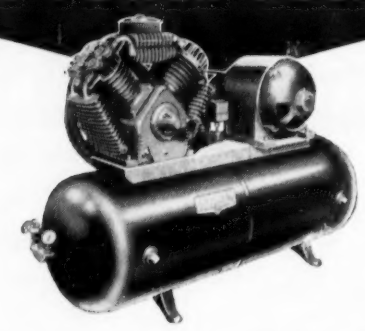
All Elliott boiler tube expanders are available with drum, header, or short series mandrels. A drum mandrel is seen with the above Type K expander. For descriptive literature, write the Elliott Company, Lagonda Division, Springfield, Ohio, for Bulletin Y-46.

Y7-6

ELLIOTT Company
For Tube Cleaners, Expanders and Accessories

For more details circle NED-292 J7 on enclosed inquiry slip

22.6% more air
PER POWER DOLLAR



By actual test, DeVilbiss air compressors deliver as much as 22.6% more air per power dollar. Efficiency like this combined with great care in manufacture and assembly are reasons why a DeVilbiss compressor pays for itself out of power savings alone. Full range of pressure. Types available from ½ through 15 h.p. Write today for full details.

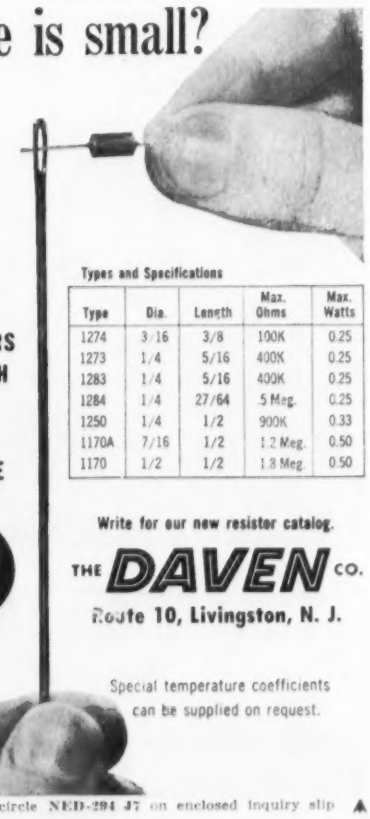
DEVILBISS

THE DEVILBISS COMPANY
Toledo, Ohio

Barrie, Ontario • London, England

For more details circle NED-293 J7 on enclosed inquiry slip

how large is small?



DAVEN'S NEW MINIATURE WIRE WOUND RESISTORS PROVIDE AS MUCH AS 400K RESISTANCE IN ¼" x 5/16" SPACE

Types and Specifications

Type	Dia.	Length	Max. Ohms	Max. Watts
1274	3/16	3/8	100K	0.25
1273	1/4	5/16	400K	0.25
1283	1/4	5/16	400K	0.25
1284	1/4	27/64	.5 Meg.	0.25
1250	1/4	1/2	900K	0.33
1170A	7/16	1/2	1.2 Meg.	0.50
1170	1/2	1/2	1.8 Meg.	0.50

Write for our new resistor catalog.

THE DAVEN CO.
Route 10, Livingston, N. J.

Special temperature coefficients can be supplied on request.

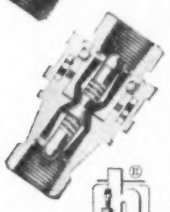
For more details circle NED-294 J7 on enclosed inquiry slip

for each particular type of application...

ALWAYS SPECIFICALLY ENGINEERED ...NEVER MERELY ADAPTED

HANSEN QUICK-CONNECTIVE COUPLINGS

ONE-WAY SHUT-OFF
Shuts off one side of line
Can be instantly connected or disconnected with immediate flow or shut-off of fluid from supply end of line. Available in wide range of sizes, with various types of fittings.



TWO-WAY SHUT-OFF
Shuts off both sides of line
Quickly connected or disconnected. Identical torpedo type valves provide instant shut-off of fluid on both sides of line. Female pipe thread connections from 1/8" to 1". Available in brass or steel.

Also Straight-Through Couplings
Sizes ranging from 1/4" to 2 1/2" carried in stock.

WRITE FOR THIS HANSEN CATALOG
Representatives in Principal Cities

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 11, OHIO

For more details circle NED-295 J7 on enclosed inquiry slip

SOUTH BEND 14 1/2" LATHES take tolerances in their stride. Their accuracy, smoothness and operating ease save time on the tough jobs as well as the routine ones. With proper tooling, work can often be machined with such precision and smoothness that subsequent grinding, honing or lapping operations may be eliminated. Dollar-for-dollar you get more in South Bend Lathes . . . Write for catalog now and find out how South Bend Lathes can lower your machining costs.

Accuracy to keep machining economical!

How to Run a Lathe —helpful handbook for machinists. 128 pages. 50c postpaid.

Prices $1,975 up, f.o.b. factory

SOUTH BEND LATHE
South Bend 22, Indiana

For more details circle NED-296 J7 on enclosed inquiry slip

RUEMELIN *Blast Cleaning* **CABINETS**

RUEMELIN Blast Cabinets are practical for a great variety of cleaning operations. They are extensively used to remove heat-treating scale and to clean sub-assemblies in metalworking shops, foundries, aircraft factories, etc. Built in many sizes. Furnished complete with dust control equipment. Write for Bulletin 32-B.

RUEMELIN MANUFACTURING CO.
3883 N. PALMER ST. • MILWAUKEE 12, WIS., U. S. A.
Manufacturers and Engineers SAND BLAST AND DUST COLLECTING EQUIPMENT, WELDING FUME COLLECTORS

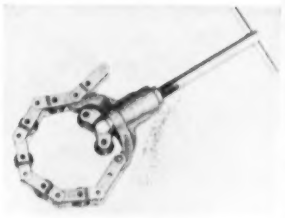
For more details circle NED-297 J7 on enclosed inquiry slip

STEEL STRAPPING TENSIONER
tightens 1 1/4-in. strap on crates

Compact, lightweight model WN-114 air-powered Stretcher will help speed up tensioning of 1 1/4-in. heavy duty steel strapping on crates, skids, coil stock and freight car bracing. Tool provides up to 3900 lb of predetermined tension and virtually eliminates operator fatigue. Features include a cutter attachment that quickly cuts off excess steel strapping and a rolling gripper which makes it easy to disengage strapping. Made by **Signode Steel Strapping Co.**, Dept. NED, 2600 N. Western Ave., Chicago 47, Ill.

For more details circle NED-298 J7 on enclosed inquiry slip

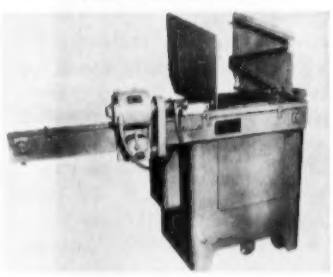
PIPE CUTTER
for cast iron, Duriron and clay pipe



Lightweight No. 4 pipe cutter is suited for cutting 1 1/2 to 4-in. cast iron, Duriron, vitrified clay or concrete pipe on the job. It weighs 4 1/2 lb and can be used in close quarters encountered in maintenance and remodeling jobs. Price is $29.95. Made by **Spring Load Mfg. Corp.**, 6332-J Maynard Ave., Seattle 8, Wash.

For more details circle NED-299 J7 on enclosed inquiry slip

BAR & TUBE FEEDER
feeds from conveyor into grinder



Magazine - loading feed with any desired constant rate of 5 to 20 fpm is available with the special model 1700B bar and tube feeder. It can be set up to feed automatically from a conveyor line into a grinding machine. Parts are cycled either by photoelectric relay or mercury switch. Cycling controls can also be operated by the magazine loader or machine being fed. Feeder is self-contained, is furnished ready to operate, and has a 1/4-hp three-phase motor and variable speed chain drive for conveyor. Special tooling for handling a wide range of parts is available. Made by **Feedall, Inc.**, Dept. ND, 38399 Pelton Rd., Willoughby, O.

For more details circle NED-300 J7 on enclosed inquiry slip

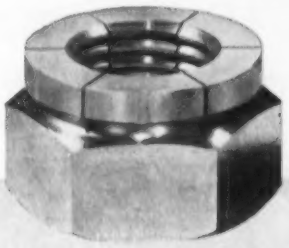
grind TWO parallel surfaces in ONE operation . . . accurately

Gardner 2H30 Precision Double Spindle Grinder
greater stability of new 2H30 grinds to closer tolerances
Get complete data in Catalog 2H30-55

GARDNER precision disc grinders
GARDNER MACHINE COMPANY
460 Gardner St.
Beloit, Wisconsin

For more details circle NED-301 J7 on enclosed inquiry slip

specify standard



FLEXLOC® SELF-LOCKING NUTS

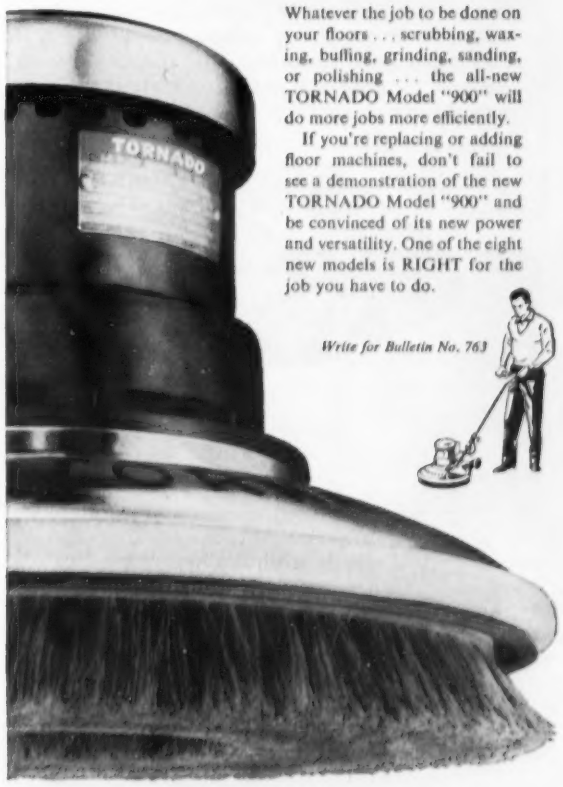
FLEXLOC DESIGN FEATURES
- one-piece, all-metal construction
- resilient locking section
- controlled locking torques
- lock and stop nut in one
- every thread carries its full share of load

DO YOU KNOW? FLEXLOCS do not have to be seated to lock. They lock anywhere on a bolt as soon as the locking threads are fully engaged. And FLEXLOCS are stocked by authorized industrial distributors in a full range of sizes from #0 to 2". Write for Bulletin 866. STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

STANDARD PRESSED STEEL CO.
FLEXLOC LOCKNUT DIVISION SPS JENKINTOWN PENNSYLVANIA

For more details circle NED-302 J7 on enclosed inquiry slip

TORNADO®
PRESENTS THE NEW POWERFUL
MODEL "900" FLOOR MACHINE



Whatever the job to be done on your floors . . . scrubbing, waxing, buffing, grinding, sanding, or polishing . . . the all-new TORNADO Model "900" will do more jobs more efficiently.

If you're replacing or adding floor machines, don't fail to see a demonstration of the new TORNADO Model "900" and be convinced of its new power and versatility. One of the eight new models is RIGHT for the job you have to do.

Write for Bulletin No. 763

- NEW **POWERFUL MOTORS** New heavy duty, capacitor start motors with horsepower ranging from 1/3 H.P. to 1 H.P.
- NEW **BRUSH SPREADS** Four brush diameters for greater work potential and flexibility. 14", 16", 18", 22".
- NEW **BRUSH COUPLER** Mounts directly on gear drive. Removal of the brush takes only a slight twist. Coupler designed for dual-direction use.
- NEW **HANDLE MOUNTING** Reduces the over-all length and gives positive and complete control over the machine. No need to "fight" the "900".
- NEW **DUAL SWITCH CONTROLS** Permit the operator to use either hand to control motor. One switch can be used to control solution tank for scrubbing.

See us at the Sanitation Maintenance Show & Conference, Navy Pier, Chicago, Illinois, October 14-16, Booth 202

BREUER ELECTRIC MFG. CO.
5116 N. RAVENSWOOD AVE., CHICAGO 40, ILLINOIS

For more details circle NED-303 J7 on enclosed inquiry slip

Comes on Instantly
—AUTOMATICALLY—
when Power fails!

AO SENTRY-LITE

AO SENTRY-LITE MODEL 200X

Model shown lights 10,000 sq. ft. for 12 hours or longer . . . aids safety and production, helps prevent panic and pilferage. Shuts off automatically when power resumes.

Battery needs water only once a year. Easy to carry about plant — makes splendid auxiliary light. Model 100X (not shown) has single head which lights 5,000 sq. ft. for 15 hours or longer. Your nearest American Optical Safety Products Representative can supply you.

Always insist on Trade-marked Safety Products.

American Optical COMPANY SAFETY PRODUCTS DIVISION

SOUTHBRIDGE, MASSACHUSETTS *Branches in Principal Cities*

For more details circle NED-305 J7 on enclosed inquiry slip

For Proper, Low-Cost Replacement and Maintenance

GITS

World's Largest Selection of Low-Cost Lubricating Devices

LUBRIKIT... An assortment of 95 oil cups of 29 different types. Gits sales records show these oilers are most used for replacement and maintenance. Contents of each separate bin are clearly described on inside cover.

Special Introductory Price JUST $14.95 F.O.B. FACTORY

Satisfaction or Your Money Back

SIGHT GRAVITY FEED MULTIPLE OILERS

This one unit replaces 3 to 8 individual oilers. Maximum practicality in a small central lubrication system. Positive cut-off during idle periods. Individual vibration-proof needle valve adjustments. With solenoid control (Illustrated): Style MDS—No. 4685-A. Without solenoid: Style MD.

Too much machine "down-time"? Too much time wasted in servicing your machinery? Perhaps some old, worn lubricating devices need replacement. Maybe a different, more modern device will do the job more efficiently. Whenever you replace, specify GITS Lubricating Devices—the widest selection available anywhere, right in stock. The items pictured above are only a few of our many thousands of lubricating devices. Send NOW for your free Catalog.

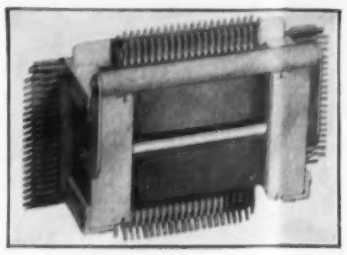
GITS BROS. MFG. CO.

The Standard For Industry For Almost Half A Century

1833 South Kilbourn Avenue
Chicago 23, Illinois

For more details circle NED-306 J7 on enclosed inquiry slip

PUNCHED CARD READER simplifies circuit switching



A simplified circuit switching device, this punched card reader provides a substitute for patch cord panel systems used in changing circuit connections at random intervals. It consists of a molded block with 400 floating contacts passing from one face to the other. Block is sandwiched between two printed wire boards having strip conductors in various grill-like formations. Contacts make connection between conductor on one board to groups on the other, except where a card interposes an insulation. Card perforations permit connection to be made where desired. Ordinary 3 x 5-in. cards containing 400 holes positioned in 20 x 20 array are used. Blocks can be mounted in multiples for complicated switching problems. Made by **Cinch Mfg. Corp.**, Howard B. Jones Div., Dept. N, 1026 S. Homan Ave., Chicago 24, Ill.

For more details circle NED-307 J7 on enclosed inquiry slip

VAPOR CONDENSERS sizes increased to 15 million Btu

Increased capacity units with ratings up to 15 million Btu are included in line of Aero vapor condensers used to provide high vacuum for evaporators in chemical and food processing. Vapor is condensed in tubes over which water is sprayed, removing heat by evaporation in a stream of air conducted outdoors. Air mixed with the vapor to be condensed is removed by means of steam ejector nozzle or vacuum pump and is separated from condensate by screening baffle-tube in the condensate drain. Condensing temperatures are within 20° F of atmospheric wet-bulb temperature. Made by **Niagara Blower Co.**, Dept. E.D., 405 Lexington Ave., New York 17, N. Y.

For more details circle NED-308 J7 on enclosed inquiry slip

Stand-By Electric Sets

Caterpillar Tractor Co.—"Power for Protection" is title of catalog D721 on diesel driven electric sets for stand-by service in all types of industrial, commercial and institutional service. Ratings range up to 350 kw in these units which are a reliable source of electric power should the normal source fail for any reason.

For more details circle NED-309 J7 on enclosed inquiry slip

Drill MORE HOLES at LESS COST with a...

Cyclo-twist® ROTARY CARBIDE-TIPPED DRILL

than by using Old Fashioned Steel Star Drills

The most efficient single point drill available for drilling ORDINARY MASONRY. Only Cyclo-twist gives you all these Features . . .

1. Ground Cutting Edges
2. No Carbide hangover
3. Spiral Flutes assure positive dust removal from cutting zone
4. Ground Surfaces Throughout
5. High Quality Alloy Steel
6. Copied but never equalled. To be sure look for this Trade Mark.

Sizes from 7/64" to 1½" diameter
Extra lengths up to 36".

New England Carbide-Tipped MASONRY DRILLS

DESIGNED, ENGINEERED and PROVEN for the Job! Copied but NEVER equalled!
Available at Hardware and Industrial Supply Houses everywhere.

SEND for FREE copy of "WHAT and HOW" Masonry Drilling Manual. Write
NEW ENGLAND CARBIDE TOOL CO., INC.
55V Commercial St., Medford 55, Mass.

For more details circle NED-310 J7 on enclosed inquiry slip

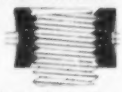
DOUBLE CHAMFERED ALL-METAL RE-USABLE

Starts from either end—locks in body of nut, not at the crown.

THE **M·F** *TWO-WAY LOCK NUT*

FOR FAST, AUTOMATED APPLICATION, WITHOUT SELECTIVE DEVICES

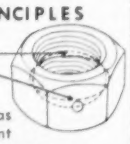
MORE LOCKING POWER WHEN BOLT ENDS MUST BE FLUSH WITH NUT



Because the locking device is in the body of the nut, not at the ends, the lock is farther from the end of the bolt—a more positive lock even when *all threads are not used!*

TWO LOCKING PRINCIPLES

TWO POINTS OF LOCK



Ovalized as well as deflected at point of lock. Opposing center pressure points give 180° spring.

OFF-THE-SHELF SIZES

SIZE	THREADS PER INCH		FULL THICKNESS WIDTH ACROSS	FULL THICKNESS THICKNESS
#10 *	32	24	7/16	7/32
¼	28	20	7/16	7/32
5/16	24	18	½	17/64
3/8	24	16	9/16	21/64
7/16	20	14	5/8	3/8
7/16	20	14	11/16	3/8
½ †	20	13	¾	7/16
9/16	18	12	7/8	31/64
5/8	18	11	15/16	35/64
¾	16	10	1⅛	41/64

* ¼" Blank † Available Jam Thickness in ½" and Over.

MAC LEAN-FOGG *Lock Nut Company* 5535 N. Wolcott Street, Chicago 40, Ill.

For more details circle NED-311 J7 on enclosed inquiry slip

BUILDING CORNERS

Need Anchor Guard Rail

Anchor Guard Rail makes an ideal *first line of defense* for building corners, plant parking lots, transformer enclosures, pipe installations, driveways and valuable fencing. With its extreme strength and compact design, Anchor Guard Rail provides sturdy, *buffer* protection. Only minimum maintenance is required to keep it good-looking and neat.

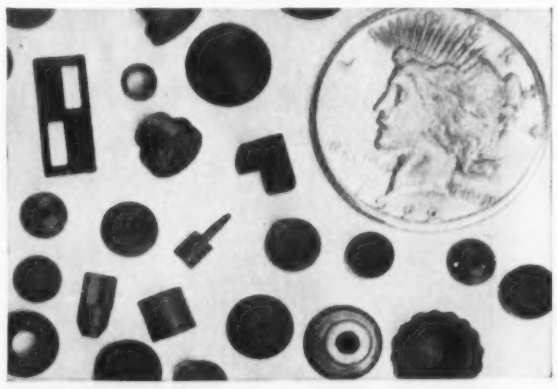
Anchor is erected by our own factory-trained experts . . . backed by 65 years of erecting experience. Call your local Anchor office for a free estimate or write: ANCHOR FENCE, 7009 Eastern Ave., Baltimore 24, Maryland.

Anchor Fence®

Division of ANCHOR POST PRODUCTS, Inc.

Plants in: Baltimore, Md.; Houston, Texas; and Whittier, California
Sold direct from factory branches and warehouses in all principal cities

For more details circle NED-312 J7 on enclosed inquiry slip



Examples of Minn. Rubber sub-miniature rubber parts.

free samples free samples

Rubber parts for you to test . . . samples of Minnesota Rubber's custom molding, silicone fabrication, rubber bonded to metal, seals or sub-miniature parts will be sent you without obligation. Technical data will be included. Simply specify the type of product or part you are interested in.

To show you the superiority of injection molding . . . these samples will point up the advantages of Minnesota Rubber's exclusive *injection molding* process. This development of MR offers mass production at low cost with tolerances possible within .002". Tougher structure, longer flexing life are additional advantages of injection molding that can mean greater economy and high, consistent quality. *Write today* for your FREE samples and technical data. Please specify type of product or part from listing above.

minnesota rubber & gasket co.

Originators of Modern Rubber Injection Molding
3630 Wooddale Avenue, Minneapolis 16, Minn., Dept. 610

For more details circle NED-313 J7 on enclosed inquiry slip

suspension type FLEXIBLE SHAFT MACHINE eliminates tooling problem for I. B. M.

International Business Machines Corporation had the problem of reaming holes .813" in diameter in the mounting hanger on the main base of their 407 Accounting Machine. To eliminate expensive tooling for this operation, they selected a STOW V50 portable flexible shaft machine, which was specially fitted with an on-off switch mounted on the handpiece.

The V50 machine delivers 1150, 2100, 3450 or 5750 RPM, is furnished with a 6-foot flexible shaft. Other speeds can be achieved by using different size pulleys. (I. B. M. ran the reamer at 750 RPM.) Available in either ¾, 1, 1½ or 3 HP, the V50 can be used for grinding, buffing, sanding, wire brushing and drilling. **Stow Manufacturing Co.**, 26 Shear Street • Binghamton, New York. *Advt.*

▲ For more details circle **NED-314 J7** on enclosed inquiry slip ▲

A VERSATILE CONVEYOR FOR HANDLING STAMPINGS, FORGINGS, CASTINGS, SMALL PARTS

BELT

SERIES P

VERSA-VEYOR

Series P provides a steady flow of parts in process. Use it between machines or from machine to storage or scrap containers. Eliminate double handling. Strong, slider bed frame of 14-gauge enameled steel. Powered by gearhead motor and roller chain to head pulley. Belt speed 60 f.p.m. Available with solid woven cotton, neoprene or woven galvanized steel belt with 1½" cleats. Under-carriage optional. Lower your handling costs with a Series P.

WRITE FOR COMPLETE INFORMATION ON BELT CONVEYORS

THE BELT CORPORATION

5753 STAHL ROAD, ORIENT, OHIO

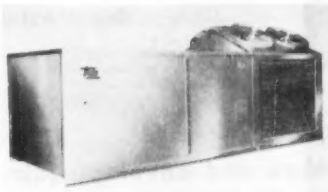
▲ For more details circle **NED-315 J7** on enclosed inquiry slip ▲

COMBINATION BLOWER-HEATER heaters are rated 200 to 1000 w

Two blower-heater combination units for use in vending machines, dryers, food warmers and other applications use a coiled wire heating element that is insulated to protect the outer wall. Blower is designed for continuous operation, but can be thermostatically controlled. Outlet or inlet mounting, flat strap or L-shaped mounting brackets are offered. Type DS delivers 55 cfm of free air at 3000 rpm, and type YSS delivers 50 cfm of free air at 1500 rpm. Motors for both types operate on 110 v, 60 cycles. Heaters are rated from 200 to 1000 w. Made by **Heinze Electric Co.**, Dept. A, 6[illegible] Lawrence St., Lowell, Mass.

▲ For more details circle **NED-31[illegible] J7** on enclosed inquiry slip ▲

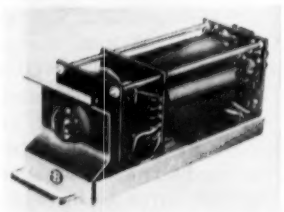
AIR CONDITIONER roof mounted in 3 to 7½-ton models



Air-cooled, self-contained 3, 5 and 7½-ton air conditioners are designed for roof-top mounting in commercial and industrial service. Only one opening is required in the ceiling for the combination supply and return diffuser grille. Fully insulated, they are made of reflective aluminum. Angle-set cooling coil for high heat transfer to the cooling air and large filters for operation with minimum of maintenance are features. Made by **Bohn Aluminum & Brass Corp.**, Betz Div., Danville, Ill.

▲ For more details circle **NED-318 J7** on enclosed inquiry slip ▲

ELECTRONIC DECADE COUNTER numbers displayed on single tube



All-electronic readout is provided by this decade counter which is made up of Burroughs type 6700 beam switching tube and the type 6844 Nixie indicator tube. Numerical information is directly controlled by a single counter tube. Precise in-line figures are visible 30 or 40 ft. Plug-in units for 3 1/16-in. minimum panel height can be cascaded for any desired count capacity with provisions for manual and electronic zero setting. Three models cover the 10-kc, 100-kc and 1-mc ranges. Made by **Burroughs Corp.**, Electronic Tube Div., Dept. 1, Plainfield, N. J.

▲ For more details circle **NED-319 J7** on enclosed inquiry slip ▲

An Important Tool for Every Factory . . .

. . . the **HANSEN One-Hand Tacker!**

Skilled Workmen, Tradesmen, Carpenters, Mechanics, Displaymen . . . find 1001 uses for the HANSEN One-Hand Tacker. Every Tool Kit and Work Bench should be equipped with this handy, versatile tool—and HANSEN makes the best! . . . for insulation, shelving, material and trim, upholstery, screens, posters and banners, window shades, rugs, toys, venetian blinds . . . any job where you would normally use a hammer and tacks.

Choose from 36 different models from heavy duty to hobbyist types—80 tack point sizes. Remember to specify HANSEN . . . the leading name in Tackers!

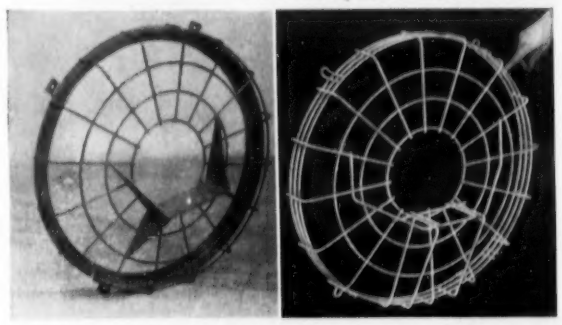
T-4571 Write for Free Booklet

A. L. HANSEN MFG. CO.

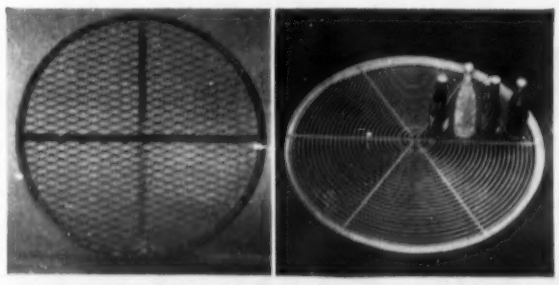
5144 Ravenswood Ave. • Chicago 40, Ill.

▲ For more details circle **NED-320 J7** on enclosed inquiry slip ▲

COST CUTTING IDEAS . . . . by TITCHENER



SAVES $7.15 PER UNIT! Motor mount and guard (left), formerly used by famous electrical equipment manufacturer, required a heavy cast frame, and it weighed 24 lbs. Working with customer's engineers, Titchener designed and built simple wire mount and guard (right). Wire unit weighs only 13½ lbs., improves performance and costs less. For details, circle Report No. 2.



SUPPORTS 200 LBS.! Spiral wire shelf (right) was designed and built by Titchener for beverage cooler manufacturer. Wire shelf is less expensive than expanded metal shelf, supports 200 lbs. without reinforcing. Circle Report No. 1.

Tell it To Titchener Learn how a wire/strip assembly can help you cut costs, ease material shortages and improve your product. Visit our plant and talk to our wire/strip experts. Or send drawings, photographs or samples. We'll send you our suggestions—no cost or obligation.

MAIL THIS COUPON

WIRE/STRIP HEADQUARTERS

E. H. TITCHENER & CO.

Dept. 3502

67 Clinton St., Binghamton, N.Y.

Send Wire/Strip Application Reports circled: Nos. 1 2

☐ Have a Titchener Field Engineer call.

NAME _____ TITLE _____

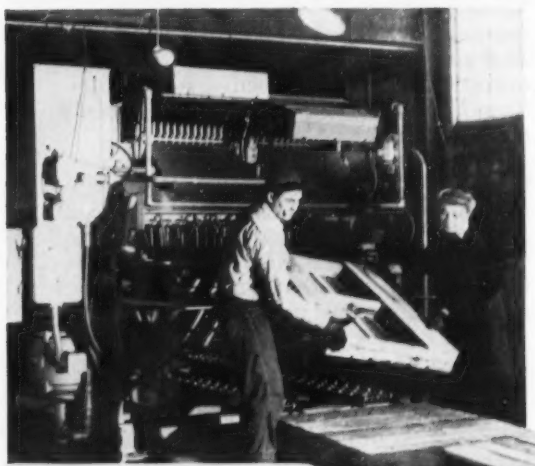
COMPANY _____

STREET _____

CITY _____ STATE _____

▲ For more details circle **NED-321 J7** on enclosed inquiry slip ▲

FMC STOPPED HAND HAMMERING—STARTED MACHINE NAILING at BETTER BUILT WOOD PRODUCTS



HOW *an automatic* FMC HARDWOOD NAILING MACHINE

eliminates Hardwood Splitting, provides Uniformly Nailed Square Pallets, produces Regular and Rush Orders on Time.

DELMER LaCOUNT, President of Better Built Wood Products, says his FMC nailing machine and a few men turn out a couple of truckloads of hardwood pallets a day. Hand-nailing is "out" in his plant; an FMC automatic nailer has taken over to 1) increase sales, 2) speed up operations, 3) increase volume, 4) turn out a better product and 5) cut costs and accidents. Labor relations are better too; men feed the machine instead of swinging hammers!

Why don't you substitute the automation of an FMC hardwood nailer for hand-nailing? As LaCount says: *"We've had no mechanical failures."* You'll build a better product and bigger sales when you automatically nail with an FMC hardwood nailing machine. *Request bulletin today!*

Located at Anston, Wisconsin, Better Built is using a Series 401.000 hardwood nailer for better pallet quality, higher production rates and happier employees.

FOOD MACHINERY AND CHEMICAL CORPORATION

NAILING MACHINERY SECTION

RIVERSIDE, CALIFORNIA

fmc

Please send full details about the Series 401.000 Hardwood Nailer.

Name _____

Company _____

Address _____

City _____ State _____

▲ For more details circle **NED-316 J7** on enclosed inquiry slip ▲

Can you use this new fitting?

LOOK AT THESE BIG ADVANTAGES!

- Provides ideal, nonrigid take-off from engines, machines, equipment.
- Rugged—made to outlast the piping.
- Conventional flange at one end. Other end has flexible compression seal.
- Eliminates threading, exact pipe fitting.
- No exposed threads to invite corrosion.
- Takes up pipe misalignment, absorbs vibration.
- Ample pipe entrance—eliminates strain on piping.
- Suitable for gas, oil, water, air, gasoline, brine and many chemicals . . . where temperatures do not exceed 215°F. Sizes thru 2".

Write today for complete information.

DRESSER MANUFACTURING DIVISION

30 Fisher Ave., Bradford, Pennsylvania

For more details circle NED-322 J7 on enclosed inquiry slip

Get Better Packaging and Lower Packaging Costs

Among the wide range of shapes, sizes, closures, and colors we now produce, there's one that will fit your needs—*without* mold costs.

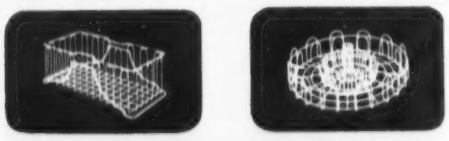
Jewel-colored Clearsite containers are moisture-tight, dust-proof, easy to multi-color print. Because they are shatter-proof, they minimize breakage cost—their light weight means lower shipping charges.

Write for free samples and descriptive literature to Dept. N.

CELLUPLASTIC CORPORATION
Sales and Executive Offices • Newark, N. J.

For more details circle NED-323 J7 on enclosed inquiry slip

Formed Wire Products



DESIGNED, FABRICATED, WELDED AND FINISHED IN PRODUCTION QUANTITIES

WE DESIGN . . . all sizes, shapes . . . or we work from your design.

WE FABRICATE . . . from low carbon steel wire, flat or round to ½ inch diameter.

WE WELD . . . by resistance welding at all points of contact.

WE FINISH . . . by swaging all butt welds, beveling wire ends; zinc plating or polyvinyl coating in any color to your specifications.

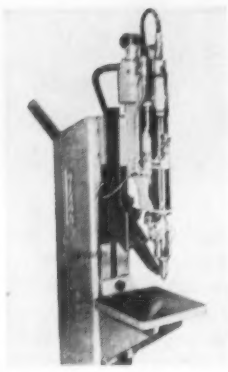
We quote from your blueprints by return mail.
Your inquiry is invited.

Peerless FORMED WIRE PRODUCTS

PEERLESS WIRE GOODS COMPANY, INC.
2706 FERRY STREET • LAFAYETTE, INDIANA

For more details circle NED-324 J7 on enclosed inquiry slip

AUTOMATIC SCREWDRIVER
air powered unit will drive up to 60 screws or nuts per minute

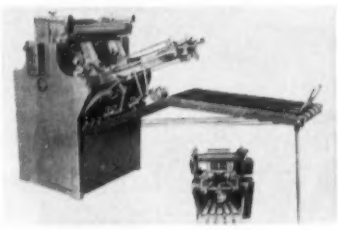


Screws and nuts up to 5/16-in. thread size can be driven at rates up to 60 per minute by model SD-1 Auto-Driver automatic screwdriver. Air motor which operates on 80 psi can be adjusted for torques from 10 to 108 lb-in. Safety sensing action stops machine if screw or nut is not placed or properly torqued. Unit is easily tooled to suit variety of screw head and nut designs. Adjustable, cushioned air cylinder assures shockproof deceleration.

Installation at single or multiple stations with fixtures, feeders, feed track and transfer or indexing tables is easy to arrange. Unit can be located at adjacent stations on 5-in. radius dial indexing table having up to 12 stations, or nested on 3¼-in. minimum centers along an inline transfer table. It operates at 2000 rpm and has 3-in. stroke. Made by **Dixon Automatic Tool, Inc.**, 2302 23rd Ave., Rockford, Ill.

For more details circle NED-325 J7 on enclosed inquiry slip

ROTARY PRINTER
handles brochure and envelope jobs at speeds up to 25,000 per hour



Such problem jobs as printing envelopes, brochures, folders, tabulating cards and booklets (completely bound) are economically handled by this Hobson Rotary printer. Machine can run stock sizes from 3½ x 5½ to 6½ x 12 in. at speeds up to 25,000 per hour due to a disk feed which can handle thicknesses from 0.004 to 0.030-in. without any other change but feed size. Adjustment of size change control knob moves all side guides, grippers, suction heads, etc.

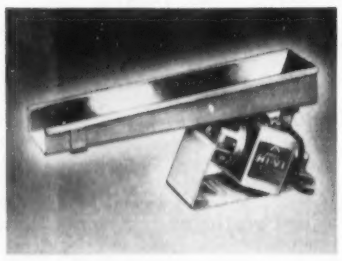
Make-ready time is minimized since no packing is required under material, and plate pressures and ink control are operated by two adjustment knobs. Bleed jobs can be run without having to run oversize stock. Press measures 40 in. wide, 7 ft 4 in. long and 50 in. high overall. Feed capacity is 26 in.; delivery capacity, 60 in. Color changes can be made quickly. Press has an electric brake and clutch, and safety controls which eliminate possibility of crushed or bulk sheets entering the press. Numbering attachments, oil ink fountain and other accessories are available. Made by **Hobson Miller Machinery Corp.**, Dept. HM25, 280 Lafayette St., New York 12, N. Y.

For more details circle NED-326 J7 on enclosed inquiry slip

NEW HI-VI VIBRATORY FEEDER BY ERIEZ OFFERS MANY ADVANCED FEATURES!

- **Totally - enclosed drive element**
- **Rustproof, long-life spring**
- **No rectifier needed**
- **More uniform feed**
- **Greater capacity than comparable physical size units**

(Pat. Pending)



Improved line of HI-VI electro-permanent magnetic vibratory feeders operate at 3600 CPM directly off an AC line—need no rectifier. Totally-enclosed drive element can't be damaged or lose efficiency due to contamination by moisture or foreign materials. Disc-shaped, glass fiber springs are rustproof; not subject to critical characteristics of steel leaf spring systems. And these new units provide greater capacity than any other comparable size feeders.

HI-VI Feeders provide a liquid-like flow to all types of bulk materials, variable from ounces to tons per hour. Units are lightweight, compact, easily installed. Almost silent operation; no sliding or rotating parts to wear. Low operating and maintenance costs. Lifetime-powered Alnico V magnet is the heart of the unit.

ERIEZ HI-VI VIBRATORY EQUIPMENT

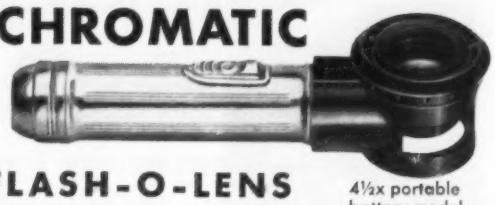
Magnetic SEPARATION AUTOMATION VIBRATION equipment

For complete information on HI-VI Feeders, write to **Eriez Mfg. Co.**, 80-W Magnet Dr., Erie, Pa.

For more details circle NED-327 J7 on enclosed inquiry slip

it's SHARP . . . it's CLEAR when you inspect with . . .

PIKE 4½ power ACHROMATIC



FLASH-O-LENS illuminated magnifiers

4½x portable battery model; also electric "plug-in" models

- sharp focus
- adjustable image
- built-in illumination
- quick conversion to 7, 20 or 40 power with interchangeable lenses

20x or 40x

WRITE TODAY for literature showing uses, types, prices

PIKE REG. U.S. PAT. OFF.

Since 1927—manufactured in the U.S.A. by—

E. W. PIKE & CO., INC.
492 North Ave., Elizabeth, N. J. • ELizabeth 2-0630

For more details circle NED-328 J7 on enclosed inquiry slip

This control relay you install and forget

"How long will it last?" is a question you must ask every time you buy a control relay. The answer is: "Good for MILLIONS of operations" when you specify a Westinghouse Type NH relay. Here is positive performance, day in and day out.

For example, a neoprene shock washer on the base plate prolongs magnetic life by absorbing operational shocks. It also compensates for any mounting irregularities. Through the use of large-area fine silver contacts and consistently high contact pressure, contact resistance is kept very low. And all bearing surfaces are specially case hardened to keep wear to a minimum to insure proper operation.

The Type NH relay is available in any combination of open or closed contacts . . . up to 6 poles. Rated at 10 amperes continuous—up to 600 volts a-c.

FOR COMPLETE TECHNICAL INFORMATION on the Type NH, write to: Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pa. J-30272

YOU CAN BE SURE . . . IF IT'S **Westinghouse**

For more details circle NED-329 J7 on enclosed inquiry slip

SHAFER® BEARINGS

CAPACITY FOR HEAVY-DUTY SHOCK LOAD SERVICE

Assure performance of your design with the high bearing capacity of Shafer Self-Aligning Roller Bearings. Shafer design combines the low rolling friction of a ball and high load carrying capacity of a roller—and maintains that capacity under shock loads, continuous heavy-duty loads—even under misalignment.

You can now get off-the-shelf delivery of standard pillow blocks, flange units, flange cartridge units, take-up and frame units. Call your CHAIN Belt District Office, Representative or Distributor today—or write for catalog 55A. CHAIN Belt Co., Shafer Bearing Division, 4686 W. Greenfield Ave., Milwaukee 1, Wis.

CHAIN BELT COMPANY
Milwaukee 1, Wisconsin

▲ For more details circle NED-330 J7 on enclosed inquiry slip ▲

Colored AISLE MARKERS

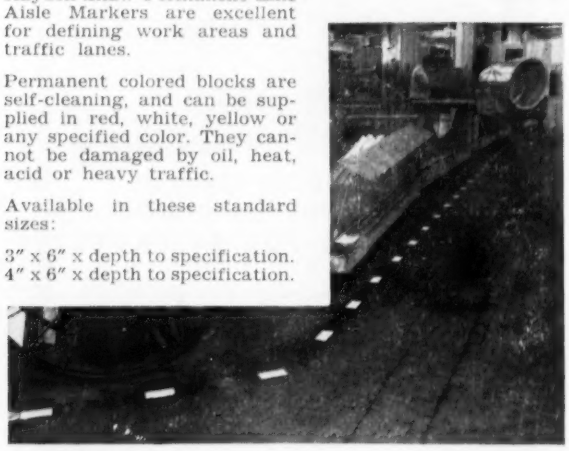
Eliminate Aisle Marking Problems

Hayden-Shaw Permanent Line Aisle Markers are excellent for defining work areas and traffic lanes.

Permanent colored blocks are self-cleaning, and can be supplied in red, white, yellow or any specified color. They cannot be damaged by oil, heat, acid or heavy traffic.

Available in these standard sizes:

3" x 6" x depth to specification.
4" x 6" x depth to specification.



The Martin Company of Baltimore, Maryland, is using permanent colored aisle markers with creosoted wood block flooring as illustrated.

HAYDEN-SHAW MINERAL PRODUCTS
7814 W. Jefferson
Detroit 17, Michigan

▲ For more details circle NED-331 J7 on enclosed inquiry slip ▲

Schramm Sump Pump for sludge, mud, water, or raw sewage.

PUMP...

thick, viscous sludge as easily as clear water

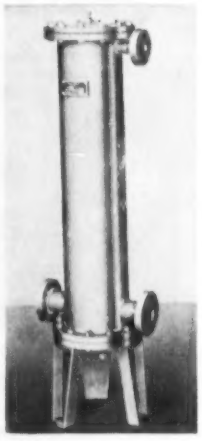
You can do it with a Schramm Sump Pump—operated from any air source. Schramm units remove water from flooded cellars, clean raw sewage tanks, at the rate of 400 gpm @ 10-ft head—340 gpm @ 20-ft head—280 gpm @ 30-ft head. Iron or bronze bodies to suit service. Ask local dealer for demonstration or write for free Catalog, SP-56.

Schramm, Inc.
MANUFACTURERS OF AIR COMPRESSORS
700 North Garfield Ave. • West Chester, Pa.

▲ For more details circle NED-332 J7 on enclosed inquiry slip ▲

SMALL LINED FILTERS

filter area increased 75 per cent



Filtering area of line of small corrosion-resistant, lined liquid filters has been increased by 75 per cent. The RL-1 (rubber lined) and LL-1 (lead lined) units now have 3½ sq ft of filter area, but do not require any more floor space. Features include cleaning by reverse flow without disassembly and accessibility to element for inspection. Units are used typically to filter sulphuric, hydrochloric, nitric and hydrofluoric acids; liquid chlorine; hydrogen peroxide; and most other highly corrosive liquids. Both RL-1 and LL-1 models operate at maximum pressure of 125 psi, at respective maximum temperatures of 160 and 200° F. Made by **R. P. Adams Co.**, 327 E. Park Dr., Buffalo 17, N. Y.

▲ For more details circle NED-333 J7 on enclosed inquiry slip ▲

SELF-FEEDING AIR DRILL

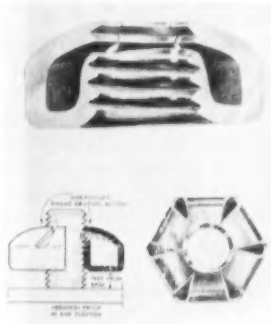
20,000-rpm unit drills 1/16-in. hole

This Midg-A-matic self-feeding air drill has 1-in. diameter, 10 3/16-in. length and will drill up to 1/16-in. holes. It operates with low air consumption at 20,000 rpm and has a 1⅜-in. stroke. Use is singly or in multiples. Applications include aircraft, automotive, radio and television, appliance and woodworking fields. Made by **Aro Equipment Corp.**, Erie St., Bryan, O.

▲ For more details circle NED-334 J7 on enclosed inquiry slip ▲

STAINLESS HEX NUT

has thread locking torque fins



Six structural bracing fins of the Torq-Lok hexagon nut provide uniform tension around the stud on which it is used. Torque is produced, even in repeated use, without distortion of the threaded hole. Jam-nut locking action is produced by running the nut up against a solid surface. Stamped stainless steel fastener is slightly smaller than the stud at the bracing fins, which expand to stud size. It is made in various sizes, including micro sizes, and also to specific metal requirements. Made by **Tubing Seal Cap, Inc.**, Torq-Lok Div., 808 W. Santa Anita St., San Gabriel 2, Calif.

▲ For more details circle NED-335 J7 on enclosed inquiry slip ▲

NEW SPEED REDUCER Reference Bulletin

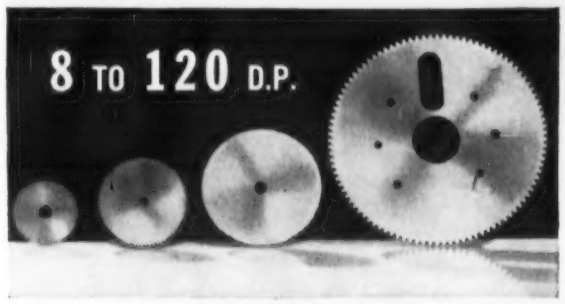
Specifications on almost 5,000 standard stock Cone-Drive speed reducers, including shaft mounted and fan or water-cooled models. Capacities from fractional to 665 hp. Center distances from 2" to 18".

24 pages illustrated with assembly drawings, mechanical and thermal hp ratings, output torque and chain-pull ratings plus other useful facts.

Write for free Bulletin CD-218 today!

CONE-DRIVE GEARS
Division, Michigan Tool Company
DOUBLE ENVELOPING GEAR SETS & SPEED REDUCERS
7171 E. McNICHOLS ROAD • DETROIT 12, MICHIGAN

▲ For more details circle NED-336 J7 on enclosed inquiry slip ▲



LONG LIST OF STOCK GEAR DIES OFFERS YOU BIG SAVINGS!

ACCURATE STAMPED GEARS by *WINZELER* are BIG savers of time and money. Single stampings are laminated to wide faces at savings up to 60%! Further economies are made possible by a BIG range of *stock* Dies. Modern new plant, methods, and equipment now greatly increase production speed, efficiency and *economy!* Send blue prints. Tell us about your needs today. No obligation.

SEND FOR...

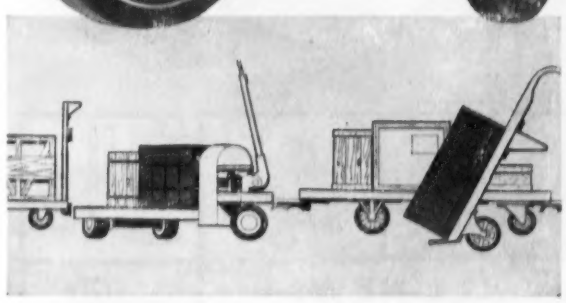
New list of WINZELER-made stock Gear Dies. Ask for it on company letterhead, *please!*

WINZELER Stamped Gears

WINZELER MANUFACTURING & TOOL CO.
7355 W. WILSON AVENUE • CHICAGO 31, ILLINOIS

▲ For more details circle NED-337 J7 on enclosed inquiry slip ▲

Big or Small



We'll retread them —*in just two weeks*

NO NEED to discard a caster wheel, once the tread of your industrial tire wears down. Most sizes can be restored to "like-new" condition by molding-on new rubber. We'll apply a factory-proved Goodyear retread—*in fourteen days or less.*

Here's how to take advantage of this time- and money-saving service:

1. Ready the wheels for shipment—remove bearings, races, washers and grease fittings—then turn them over to your Goodyear dealer for shipment to Goodyear Akron.

2. When we receive your wheels, we burn off the old rubber, shot blast the wheels and inspect them thoroughly. Next, we carefully weigh out the new rubber for each wheel and mold it on to factory specifications.

3. We ship your reconditioned wheels back to the Goodyear dealer, for delivery to you.

New wheels, with or without bearings, are available to replace chipped or broken wheels. Call your Goodyear dealer, or write:

Goodyear, Industrial Tire Sales, Akron 16, Ohio.

Look for this sign; there's a Goodyear dealer near you.

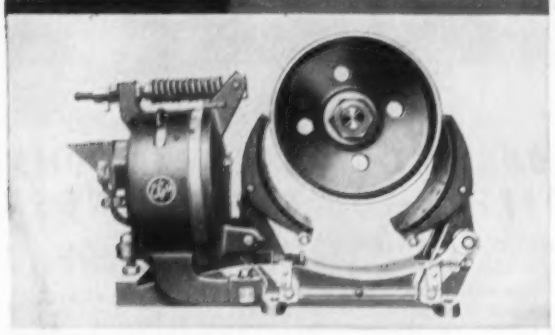
Use the Right Tire for the Job—Buy and Specify

GOODYEAR INDUSTRIAL TIRES

▲ For more details circle NED-338 J7 on enclosed inquiry slip ▲

EC&M BRAKES for AC and DC Motors

for LONGER LIFE, FEWER ADJUSTMENTS!



EC&M Type WB Brakes, designed to the new AISE-NEMA standards, assure long life and fewer adjustments because brake lining is thick, tough and of uniform quality throughout its entire thickness. Manual release is standard and connecting lever below the wheel permits quick armature replacements. These brakes are 100% lubricated... dirt is flushed out.

Write for Bulletins 1004 and 1006

THE ELECTRIC CONTROLLER & MFG. CO.
A DIVISION OF THE SQUARE D COMPANY
CLEVELAND 28 • OHIO

8018

For more details circle NED-340 J7 on enclosed inquiry slip

Bendix Bantam 2-WAY RADIO

ALL NEW! Low Power 2-Way FM Radio For All Types Of Industrial Trucks

A single 6/12/24/32 VDC and 117 VAC Communications Unit without costly converters. Operates as mobile or base station.

The most versatile, rugged, low-power industrial radio you can buy, the Bendix* Bantam is the result of over 5 years intensive research and development. Designed and engineered specifically for industrial trucks, it sets a new standard for dependability. Incorporating all the latest electronic advancements which have made Bendix the foremost leader in railroad and aviation communications, the Bantam makes possible real savings in materials handling operations. By equipping your fleet with the Bendix Bantam, you have instant voice contact with each operator. Results: Vehicle traffic is better coordinated, tie-ups avoided, deadheading eliminated and dollars saved.

The Bendix Bantam operates on 6, 12, 24, 32 VDC or 117 VAC without converters. Battery drain is less than a headlamp—the lowest of any mobile radio equipment on the market!

The Bendix Bantam enables mixed fleets to operate with a minimum number of sets, allowing complete interchangeability from one truck to another whether gas, electric, diesel or LPG powered. Mail coupon for full details. *Reg. U.S. Pat. Off.

DIVISION OF BENDIX AVIATION CORPORATION BALTIMORE 4, MD.

Bendix Radio

Bendix Radio
Mobile Sales, Dept. L
Baltimore 4, Md.

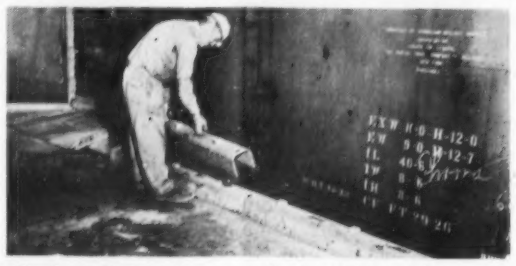
Gentlemen:
Please send me complete details about the Bendix Bantam 2-Way Radio.

Name_____
Title_____
Firm_____
Street_____
City_____ State_____

For more details circle NED-341 J7 on enclosed inquiry slip

LOADING DOCK CURBING prevents truck "run-off" accidents

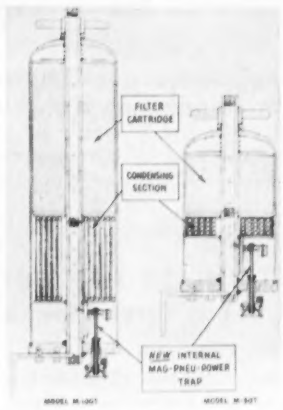
Danger of materials handling equipment being driven off truck docks, rail docks, doorways or ramps is prevented by portable magnesium dock curbing.



Easily installed and removed, the lightweight sections are positioned in predrilled holes spaced along the dock edge. The 6-ft long 60-lb sections are removed and stacked to allow trucks or rail cars to be spotted anywhere along the dock or doorway opening. Each is 6 in. high and 6 in. wide and has three $1\frac{1}{2}$-in. diameter steel blank bolts 12 in. long. Two hand holes double as stacking holes. Made by **Magnesium Service Co.**, Dept. N, 2013 Elizabeth Ave., Rahway, N. J.

For more details circle NED-342 J7 on enclosed inquiry slip

CONDENSER-FILTERS remove compressed air contaminants



Internal condenser, disposable filter cartridge and automatic condensate discharge are combined in model M-30T and M-100T Condensifilters. Units are now offered with an internal Man-Pneu-Power trap which discharges moisture and oil, entrainments, dirt, scale and other residue removed from compressed air line by the condensing-filtering action. Trap is pilot-actuated, power-operated mechanism that discharges condensate with a combined magnetic-pneumatic action and has operating capacities of 13, 42 and 60 gpm at 10, 100 and 200 psi, respectively. Condensifilters have operating capacities of 30 and 100 scfm respectively at 100 psi, with maximum operating pressures up to 200 psi. Made by **Hankison Corp.**, 237 Biltmore Bldg., Pittburgh 16, Pa.

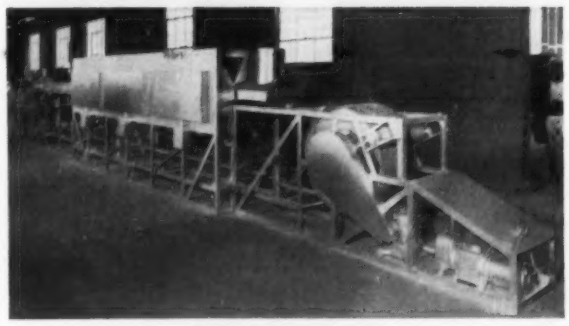
For more details circle NED-343 J7 on enclosed inquiry slip

Flow Meters

Brooks Rotameter Co.—Selection of the appropriate flow meter for a specific application is aided by illustrated bulletin 110. It contains a rotating disk selector which provides meter specifications plus a brief description of each meter.

For more details circle NED-344 J7 on enclosed inquiry slip

Still in the Lead—with another versatile **sectionalized belt furnace**



PERECO
OXIDE REDUCTION FURNACE

- Composed of four self-contained, sectionalized units—drive and loading unit; high temperature zone; cooling section; and unloading and belt take-up assembly.
- Simple bolted assembly ready for operation, or disassembly—easily relocated for changing production schedules.
- All metal treating temperatures up to 2000° F. Belt speed variable from 5 ft. to 50 ft. per hr.
- Endless solid steel belt. Available with mesh conveyor with slight modification.
- Number and size of sections variable to meet individual time, temperature and production requirements.

Write Today For Details

Standard or Special Furnaces or Kilns for Temperatures from 450° F. to 5000° F.

PERENY EQUIPMENT COLUMBUS OHIO

PERENY EQUIPMENT CO.
DEPT. G, 893 CHAMBERS RD., COLUMBUS 12, O.

For more details circle NED-346 J7 on enclosed inquiry slip

48-HOUR magnetic CHUCK REPAIR SERVICE —any electrical chuck!

GUARANTEED FOR ONE YEAR
—just as are new Magna-Lock magnetic chucks

A FIRST-CLASS JOB BY EXPERTS!

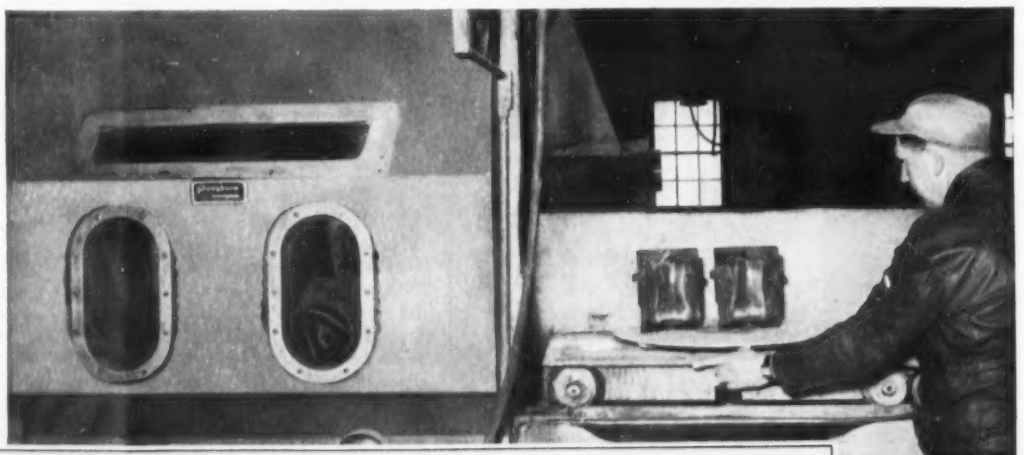
Whether your electrical magnetic chuck requires a minor repair or a complete overhauling, it will receive the same exacting care and attention, regardless of make, which go into the manufacture of new Magna-Lock magnetic chucks. Coil winding, dipping, evacuating and impregnating are done by skilled workers using the finest equipment available. And, your chuck is thoroughly tested before it is returned to you.

It will be *right* the *first* time — and will cost you less!

FOR FAST ACTION PHONE 815

Hanchett MAGNA-LOCK CORPORATION
BIG RAPIDS, MICHIGAN, U.S.A.
designers and makers of a complete line of magnetic chucks and devices.

For more details circle NED-347 J7 on enclosed inquiry slip



Pangborn Hydro-Finish cut cleaning time 50% in this plant
Paid for itself in only six months

Pangborn Hydro-Finish really paid off for this leading glass manufacturer. Cleaning quality increased moldlife 10% to 15% and total cleaning and polishing time was cut in half! The resultant savings paid for the machine in six months and represented a substantial weekly sum thereafter.

USE PANGBORN HYDRO-FINISH FOR:
Deburring • Surface finishing • Finishing threaded sections • Improving cutting tool life • Maintaining dies and molds • Removing grinding lines • Removing heat treat scale • Preparing surfaces

Today, through new design and use of air jet sluriators, Pangborn Hydro-Finish costs less originally, costs less to maintain and gives you easier handling and added efficiency. Write for Bulletin 1403 to PANGBORN CORP., 2400 Pangborn Blvd., Hagerstown, Md. *Manufacturers of Blast Cleaning and Dust Control Equipment.*

Pangborn
BLAST CLEANS CHEAPER

For more details circle NED-345 J7 on enclosed inquiry slip

Terror of Darkness

Need Not Happen in Emergencies!

Protect your plant and your personnel against the hazards of sudden blackouts ...especially during those first 60 seconds of terror-striking pitch blackness. Install BIG BEAM Automatic Lights—NOW!

Big Beam Automatic EMERGENCY LIGHTS

With Built-In Automatic Chargers

Model 2ATW plugs into lighting outlet. Gives instant light automatically whenever regular current fails. Available with either 25, 30, 40, 80 or 100 ampere hour glass jar batteries.

Other BIG BEAM LAMPS

Model No. 287EX Explosion-Proof Hand Lamp

Model No. 108F Flashing Flare Beacon

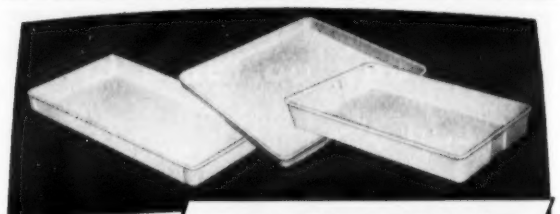
Model No. 164 Sealed Beam Beacon Lamp

Write for Complete Information 7026

U-C-LITE MFG. CO. 1073 W. Hubbard St., Chicago 22, Illinois

CANADA: Bernard Marks & Co., 70 Claremont St., Toronto 3, Ontario

For more details circle NED-348 J7 on enclosed inquiry slip



THERE'S A TOTELINE

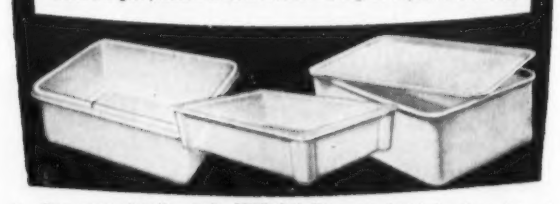
BOX OR TRAY OF MOLDED FIBERGLASS TO CARRY YOUR SMALL PARTS

- Light but strong
- Constant tare
- Clean easily
- No maintenance
- Don't absorb heat
- No sharp edges, corners
- Most boxes nest, stack
- Chemically resistant
- Wire reinforced edges
- Available in colors

WRITE FOR BULLETINS AND NAME OF NEAREST TOTELINE REPRESENTATIVE IN U.S. AND CANADA

MOLDED FIBER GLASS TRAY CO., LINESVILLE, PA.

World's largest producer of resin-reinforced fiberglass trays and tote boxes



For more details circle NED-349 J7 on enclosed inquiry slip

HOW TO WIN ARGUMENTS

on Surface Roughness!

FREE BULLETIN LT85 tells—

★ Why time is wasted by arguments about the roughness of parts produced.

★ How to end such arguments FOR SURE.

★ How shop men, engineers and management all gain when such arguments are settled by the Profilometer.

WRITE TODAY for your copy!

Profilometer is a registered trade-mark.

MICROMETRICAL MANUFACTURING COMPANY

333 S. Main St. Ann Arbor, Michigan

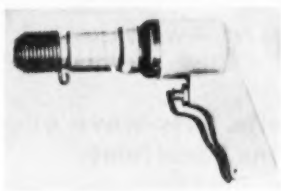
For more details circle NED-350 J7 on enclosed inquiry slip

GEAR TRAIN
ratios from 3:1 to 32,400:1

Enclosed series GT-1 gear train with 0.047-in. input shaft and 1/8-in. output shaft is offered in reductions from 3:1 to 32,400:1. Gearing will withstand a static loading of 5 lb-in. and a maximum continuous running load of 20 oz-in. A 3/64-in. hardened steel input shaft rotates on oil-impregnated sintered bronze bearings. The 1/8-in. output shaft rotates on similar bearings. Intermediate gear assemblies are brass, and steel pinions rotate on fixed polished steel studs. Gear train is 2 in. diameter and 5/16-in. deep. Reduction can be mounted from either side through tapped 4-40 mounting studs. Made by **Vocaline Co. of America,** Bristol Motor Div., Dept. NED, Old Saybrook, Conn.

For more details circle NED-351 J7 on enclosed inquiry slip

AIR HAMMER
tool can be rotated while in use



Beehive type spring retainer holds various tools in the model HDS-700 air hammer. Operator can rotate the tool in any direction while the hammer is in use. Metering type trigger controls hammer blows from 0 to 2700 impacts per minute. Eleven forged chisels are available, including a clean-cutting panel cutter. Made by **Superior Pneumatic & Mfg., Inc.,** Dept. NE, 4758 Warner Rd., Cleveland 25, O.

For more details circle NED-352 J7 on enclosed inquiry slip

FORK TRUCK
battery-powered, lifts 1500 lb

Battery-powered Electric Clipper 1524 fork truck will travel 6.3 mph with 1500-lb capacity load, has lift speed of 43 fpm and will climb a 10 per cent grade. Finger-tip lever on steering column controls forward and reverse direction and automatically puts machine into first point of power. Lever returns to neutral when driver leaves seat. Acceleration is smooth and automatic. Hydraulic pressure is maintained by vane-type pump operated by its own enclosed motor. Unit has regular hydraulic service brakes, reverse-torque braking and a dead-man parking brake. Made by **Clark Equipment Co.,** Industrial Truck Div., 1952 Arze St., Battle Creek, Mich.

For more details circle NED-353 J7 on enclosed inquiry slip

OTC Rams Slash Blade Costs 25% ...Up Steel Mill* Production!

OTC 30-ton Power-Twin rams hold steel bars for faster cleaner cutting—without vibration.

Slicing thick steel rolled stock is tough on any blade—even carbon steel. But four OTC 30-ton rams helped this steel mill do the job faster, more economically—and get cleaner cuts.

Two rams grip the steel stock on either side of the saw blade to prevent vibration and "chatter." The other two rams position the billets for faster handling.

Results: Blade wear extended over 25 per cent, "production increased considerably."

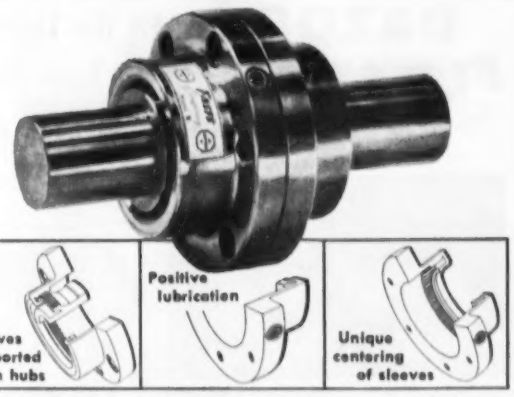
OTC Power-Twin rams—or other tools from the complete OTC line—might show you time—and money-savings. For information write

*Mill name on request

OWATONNA TOOL CO.

436 CEDAR ST., OWATONNA, MINN.

For more details circle NED-354 J7 on enclosed inquiry slip



Fast's Model B Coupling reduces downtime and upkeep for light-to-medium drives!

Now you can profit from the durability and economy of famous Fast's couplings in a smaller and lower-cost version—available in 3 sizes for shafts up to 2⅝" in diameter.

The Model B coupling gives you the same features that have made Fast's the world's leading coupling for over 35 years. You get the same trouble-free performance, longer service life and lower maintenance costs. You also get prompt delivery because stocks are on hand to meet practically every need. Free engineering service is also available.

Write today for more details to KOPPERS COMPANY, INC., Fast's Coupling Dept., 3809 Scott Street, Baltimore 3, Md.

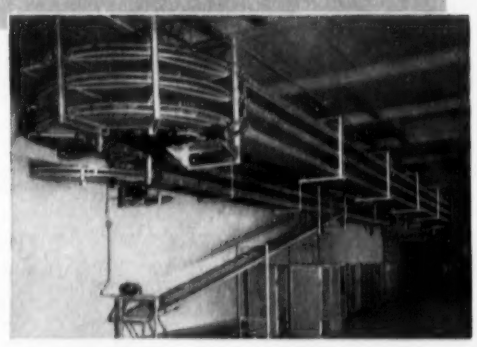
KOPPERS THE ORIGINAL **FAST'S Couplings**

Engineered Products Sold with *Service*

For more details circle NED-355 J7 on enclosed inquiry slip

WENDWAY

the conveyor that pays for itself!



Wendway is perfectly suited to the cooling of raw products, packages or containers. This spiral system travels at ceiling height to conserve floor space.

This small, single tier Wendway conveyor is used to convey small packages from bag loaders through a series of stapling machines.

A typical package conveyor installation, this three-tier Wendway system extends throughout the plant and carries a steady flow of products to waiting trucks.

● You'll be amazed at how quickly a Wendway conveyor system will pay for itself in your plant. A Wendway system will eliminate multiple handling of products, save man hours and floor space—all while conveying your products swiftly, silently, safely and economically to any desired location.

Wendway is Industry's most versatile conveyor. Its steel wire belting is ideal for any light product, carton, food, etc., up to twenty pounds per unit. It does not sag or accumulate dirt like ordinary belting and can be kept highly sanitary.

Will it work efficiently in you plant? Certainly! Prove it to yourself by returning the coupon below for additional information about Wendway—today!

USP

Gentlemen: Please send me additional information about Wendway for conveying _____

Name _____

Company _____

Address _____

City _____ Zone ____ State _____

Please have a USP Conveyor engineer contact me at once ☐

UNION STEEL PRODUCTS COMPANY

ALBION, MICHIGAN

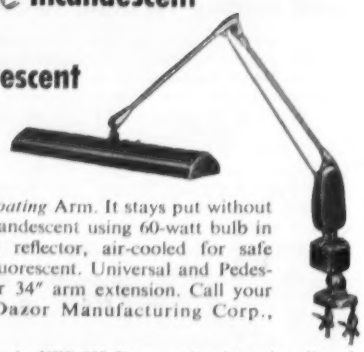
For more details circle NED-356 J7 on enclosed inquiry slip

DAZOR FLOATING LAMPS

Fit the Lighting to Each User and Each Job

Top-Mounted Reflector Side-Mounted

Air-Cooled Incandescent or Fluorescent



People . . . jobs . . . lighting needs differ. Let each employee control light location with the Dazor *Floating* Arm. It stays put without locking. Choice of Incandescent using 60-watt bulb in top- or side-mounted reflector, air-cooled for safe handling; or 2-tube Fluorescent. Universal and Pedestal models with 24" or 34" arm extension. Call your Dazor distributor. Dazor Manufacturing Corp., St. Louis 10, Mo.

For more details circle NED-357 J7 on enclosed inquiry slip

Let me give you this NEW fact-packed forging guide

If you buy or specify forgings, write for this fact-packed AmForge book. Its 16 pages show how your company can benefit from better AmForge research, engineering and control. You'll see that all this adds up to the kind of "service" you need for production quality and economy. Either circle the number on the magazine service card or write AmForge, Dept. NED-9 157 N. Wacker Dr., Chicago 9, Illinois.

AMFORGE DIVISION American Brake Shoe Company

For more details circle NED-358 J7 on enclosed inquiry slip

New Plastic Material! Repairs Floor Cracks!

A new plastic material formulated for the specific purpose of repairing floor cracks and preventing surface deterioration is announced by The Monroe Company, Inc., Cleveland.

Before

After

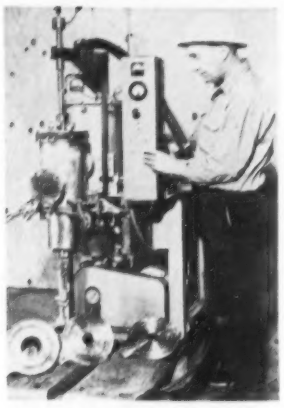
Known as "Jiffy Floor", it is a fine granular, ready-to-use plastic product that can be applied without interfering with production or traffic. It readily fills hairline cracks, shallow holes, spalled floors or expansion joints. Immediately after application, it will withstand heaviest loads.

Jiffy Floor contains no asphalt, cement, sand or gravel. It will not crack, crumble or curl . . . is not affected by temperature changes . . . can be applied indoors or out.

Jiffy Floor is waterproof, dustless, skidproof and noiseless. Available in 5-10-30 and 55-gallon drums, ready for easy use. For further information, write *The Monroe Company, Inc., 10707 Quebec Avenue, Cleveland 6, Ohio.*

For more details circle NED-359 J7 on enclosed inquiry slip

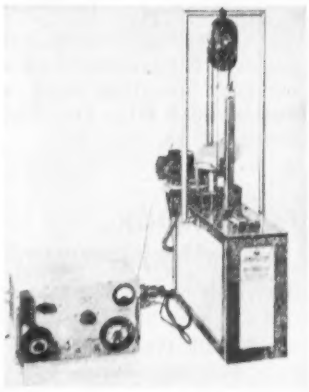
LABORATORY FURNACE affords controlled atmosphere



Research type laboratory furnace is designed for vacuum melting of titanium, zirconium, vanadium, columbium, tantalum and other metals requiring a controlled atmosphere. It will produce the standard 1½-in. diameter, ½-in. deep evaluation button by arc melting of sponge or shavings, or sample ingots from 2 to 6 in. in diameter and up to 16 in. long by the consumable electrode melting process. Molds are contained in water-cooled copper crucible. Rectifier operates on 1000 amp continuous duty cycle, requiring 440-v three-phase 60-cycle power. Large 6-in. ingots require 5000 amp. Model KC-15 Kinney vacuum pump is capable of 0.2-micron vacuum. Furnace can be pressure back filled with helium or argon, or mixture of both. Made by **Oregon Metallurgical Corp.**, Box 311, Albany, Oreg.

For more details circle NED-360 J7 on enclosed inquiry slip

SOLDERING DEVICE for printed circuits, lifts wave of molten solder to the panel joints

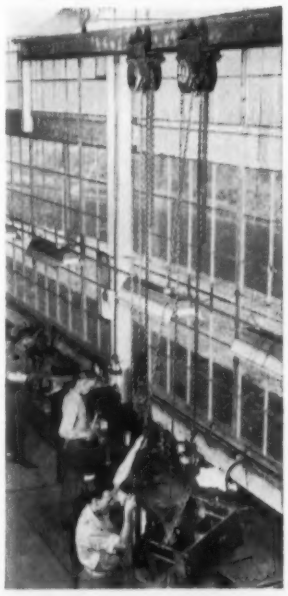


Problems involved in conventional flat dip-soldering of printed circuits are said to be eliminated by this Flowsolder unit. In operation, device lifts the molten solder up to the circuit, instead of lowering the circuit panels down to the molten solder. An impeller pump forces the metal upwards through an elongated nozzle so that it forms a stationary wave. Panel is passed through the crest of this wave, soldering the joints between the component leads and the conductors on the panel underside.

Dipping bath of the unit holds about 500 lb of metal. Unit is electrically heated, and solder temperature is thermostatically controlled at about 250° C. Width of solder wave is 8 in., although 10-in. nozzles can be furnished. Panels up to 7½ in. wide and any practical length can be handled. Electrical controls, including time switch, are enclosed in separate housing. Made by **Electrovert Inc.**, Dept. ND, 489 Fifth Ave., New York 17, N. Y.

For more details circle NED-361 J7 on enclosed inquiry slip

Peerless Packet Trolley Hoists cut handling time on assembly line



These integrated hoists and trolleys simplify handling of heavy parts on assembly lines. The worker just picks up the load, rolls it along an I-beam, lowers it on the bench top. Peerless Packet Trolley Hoists make lifting easy, cut handling time materially, require little maintenance. For more information about these time-saving and labor-easing trolley hoists, ask your authorized industrial distributor for Bulletin P-5. Or, if you prefer, write us.

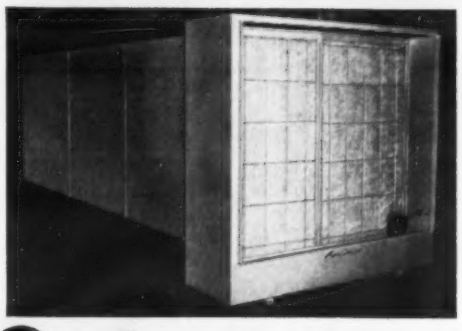
THE HARRINGTON COMPANY

Makers of Hoists Since 1876

GRAVERS ROAD AT THE TURNPIKE, PLYMOUTH MEETING 16, PA.

For more details circle NED-362 J7 on enclosed inquiry slip

FOR HIGH CAPACITY CONTROLLED HUMIDIFICATION



RP Aprilaire AUTOMATIC INDUSTRIAL **HUMIDIFIERS**

HIGH CAPACITY—Unit Sizes Up to 10 G.P.H.
POSITIVE CONTROL—No lag or over-run.
UNEQUALLED EFFICIENCY—New vapor principle eliminates water solids problem.
FLEXIBILITY—Can be suspended or pedestal mounted. Gas, steam or hot water heat source.

• ISOTHERMAL OPERATION • MINIMUM MAINTENANCE

For Information, write
RP . . . PRODUCTS OF RESEARCH **Research Products Corporation**
Dept. 910, MADISON 10, WIS.

For more details circle NED-363 J7 on enclosed inquiry slip

Take any portable drill . . . add a SUPREME Push-Pull Tapper®

Tap in all materials—fast, safely, accurately—with *minimum* breakage

The Supreme PUSH-PULL TAPPER is an instant-reversing speed reduction unit made expressly for tapping. The prize-winning Push-Pull attaches easily to either the spindle or chuck of any drill. Speed reduction of 7:1 gives adequate power to tap in all materials . . . instant-reversing means that tap direction can be reversed without stopping drill. Tap can be moved into and out of the hole at will.

With the Push-Pull tap breakage is minimum. Finger-tip control gives operator a better "feel" for break-causing strains. Complete PUSH-PULL TAPPER Kit, No. 9000, costs just $29.95; includes everything but taps. Write for literature.

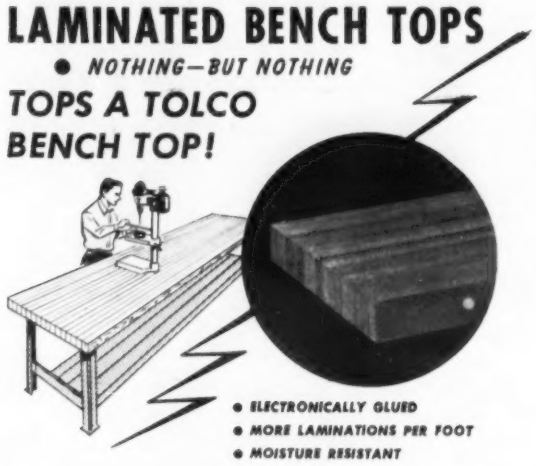
SUPREME PRODUCTS CORPORATION
2222 S. Calumet Avenue, Chicago 16, Illinois
A DIVISION OF A•S•R PRODUCTS CORPORATION

For more details circle NED-364 J7 on enclosed inquiry slip

LAMINATED BENCH TOPS

● *NOTHING—BUT NOTHING*

TOPS A TOLCO BENCH TOP!



● ELECTRONICALLY GLUED
● MORE LAMINATIONS PER FOOT
● MOISTURE RESISTANT

Tolco Northern Maple, laminated assembly bench tops are built by the originators of electronic gluing. Skilled craftsmen blend their talents with the finest quality lumber available to bring you the supreme product in the laminated bench and table top industry. Tolco tops have more laminations per board foot than any other giving them superior strength and resistance to wear and tear. Special processing makes Tolco tops especially resistant to moisture and warpage. Write today for full color catalog illustrating and describing this outstanding product. Prices on request.

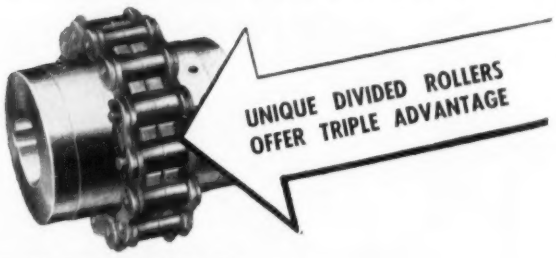
THE TOLERTON COMPANY

P. O. Box R 658 Alliance, Ohio

Established 1894

▲ For more details circle NED-365 J7 on enclosed inquiry slip ▲

For reliable shaft connections . . .



LINK-BELT "RC" flexible couplings

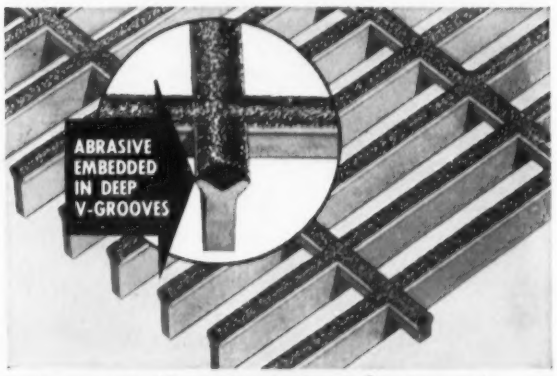
Simplicity . . . low cost . . . dependability—Link-Belt "RC" flexible couplings offer these important design and performance benefits. Unique divided roller assures equalized load . . . proper balance at high speed . . . effective compensation for shaft misalignment. These all-steel couplings are precision-made and hardened for long life. They're stocked in a wide range of sizes, and are available for shafts up to 12 inches. Write to LINK-BELT COMPANY, Dept. N.E.D., Prudential Plaza, Chicago 1, Ill., for Folder 2363.

14,468

LINK BELT

"RC" FLEXIBLE COUPLING

▲ For more details circle NED-366 J7 on enclosed inquiry slip ▲



New Reliance Relgrit® abrasive embedded grating gives safe footing under all conditions

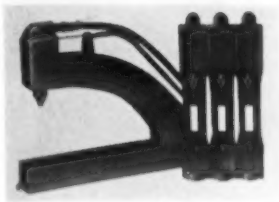
Reliance Relgrit* abrasive embedded grating is the safest grating available. Even when covered with oil, Relgrit has a coefficient of friction over 30% greater than dry steel grating. Abrasive aluminum oxide is actually embedded in deep V-grooves in the top surfaces of both bearing and cross bars. The abrasive surface will last as long as the grating without any loss of non-skid qualities. For your free sample of this remarkable new grating, write on your letterhead to Reliance Steel Products Company, P. O. Box 510-M, McKeesport, Pa.

*Patent applied for

Reliance Steel Products Company

▲ For more details circle NED-367 J7 on enclosed inquiry slip ▲

AIR IMPACT HAMMER
delivers 50 strokes per minute



Slim-line design of the Airchamp air-operated impact hammer allows multiple setups on 2¼-in. centers. As many as 10 hammers can be operated with a ½-hp air compressor, consuming 1½ cfm of air each and delivering 50 strokes per minute. Unit can stake, swage, stamp, cut, mark and punch. It has a 2-in. stroke, ram height clearance from base of 5 in. and a 10-in. throat. Made by **High Speed Hammer Co.**, 315 Norton St., Rochester 21, N. Y.

▲ For more details circle NED-368 J7 on enclosed inquiry slip ▲

SELF-DUMPING HOPPER
30 in. wide for narrow aisle use

Handling of bulk materials, scrap, and waste through narrow aisles and in confined areas is simplified with this 30-in. wide self-dumping hopper. Capable of passing through standard doors, it has a capacity of 10 cu ft. Unit is mounted on three malleable iron or rubber tired casters, and can be pushed manually or transported by fork truck. Single rear swivel caster permits sharp turns around corners. Release of locking handle allows loaded hopper to roll forward to dump, after which it returns to an upright position and automatically locks itself in place. Empty weight is 450 lb. Made by **Roura Iron Works, Inc.**, 1402 Woodland Ave., Detroit 11, Mich.

▲ For more details circle NED-369 J7 on enclosed inquiry slip ▲

BAG CUTTER
speeds emptying of paper sacks

Lifting and emptying of large paper sacks containing refractories, cements, chemicals and similar flowable materials are facilitated by this bag cutter. It cuts bags in half, allowing each half to become a separate, opened, easily-handled container. Bags can thus be stacked at the job site for convenient use. Cutter can be used at floor level or raised to desired height on its legs of 1-in. pipe. Hardened steel blade is encased in a steel sheath. Made by **Ridley & Co.**, 11275-A Massachusetts Ave., Los Angeles 25, Calif.

▲ For more details circle NED-370 J7 on enclosed inquiry slip ▲

SIMPLIFY YOUR SOLENOID VALVE PROBLEMS

with **JE** "all purpose" VALVES

For Dependable Flow Control of

- Water
- Air
- Light Oils
- Refrigerants
- Brines
- Ammonia
- Industrial Gas

J-E Solenoid Valves save time, trouble and money, since the same valve can be used to control *any* of the above liquids or gases. *Exclusively*, one size coil and one size plunger fit every J-E Solenoid Valve . . . regardless of capacity. Inventory and parts stock are greatly reduced.

Unique design and engineering assures tight seating. Only two moving parts and no close tolerances prevent jamming or clogging. They are serving industry in hundreds of applications where other solenoid valves have failed.

For information as to how they may well serve *you*, write today:

41

JE JACKES-EVANS MFG. CO.
Controls Division
4427 Geraldine Ave., St. Louis 15, Missouri

▲ For more details circle NED-371 J7 on enclosed inquiry slip ▲

New Clark ADJUSTABLE COUNTERBORE and SPOT-FACER

handles large diameters!

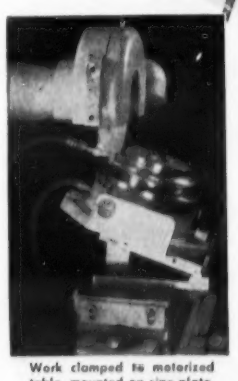
Fastest cutting, adjustable, large diameter spot-facer on the market! Takes heavy cuts without chattering by means of unique shearing action—no digging, no gouging! M3 high speed steel blades, adjustable for diameter or can be reset to size after grinding. Blades easily modified for special purposes. Machines steel forgings, heat-treated steels, cast iron, titanium, stainless, aluminum alloys, etc! Use this new Clark Adjustable Spot-Facer and Counterbore in MILLS, RADIALS, DRILLS, TURRET LATHES. Uses standard pilots or pilot drills. Straight or Morse tapered shanks.

Robert H. Clark Company

9330 Santa Monica Blvd., Beverly Hills, Calif.

▲ For more details circle NED-372 J7 on enclosed inquiry slip ▲

With Lapping Plate



Work clamped to motorized table, mounted on sine plate. Surface grinder application.

FASTER
circular precision grinding!

Now with this table and with less effort you assure highest standards of accuracy, flatness, finish and close tolerances. At the same time you eliminate slow and complicated tool setups. You cut grinding time greatly by using only cross feed while the table is rotating at infinite speeds between 40 and 100 RPM.

For example, Vulcan's Rotary Table can be used in connection with a sine plate or angle fixture. The dressing of large expensive external wheels for side grinding is therefore eliminated. If you wish we can provide permanent magnetic chucks designed for use with our table, both 6" and 10" in diameter.

Vulcan's Rotary Table is an air operated, self contained unit, portable between bench or machine. A precision center hole for locating and tapped holes in the table for clamping provides easy setup. Circular surface grinder applications are many and varied — grind flanged studs or bushings — bearing spacers — forming rolls — cutters — convex or concave surfaces — punches or dies (radius or angle).

Lapping? Yes — and in micro inches. For the 6" and 10" table, lapping plates of 12" and 16" are provided. Perfect for lapping valve plates, gages, bearing spacers and for carbide lapping using diamond powder. *Write for circular.*

SERVICES OF YOUR TOOL ROOM IN DAYTON
ENGINEERING • PROCESSING • BUILDING • TOOLS
DIES • SPECIAL MACHINES • VULCANAIRE JIG
GRINDERS • MOTORIZED ROTARY TABLES • BREHM
"SHIMMY" AND RELATED DIES • AUTOMATION

Write on your letterhead to

VULCAN TOOL COMPANY
739 Lorain Ave., Dayton 10, Ohio

VULCAN tools

▲ For more details circle NED-373 J7 on enclosed inquiry slip ▲

FOR ACTIVE RECORDS . . .

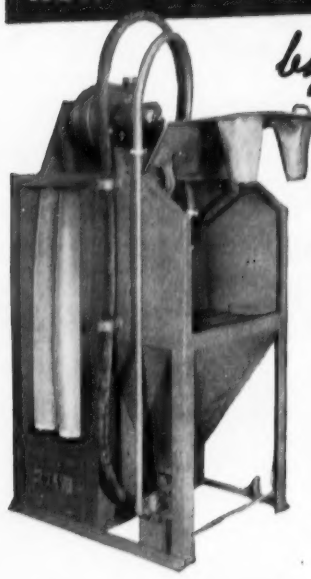
DIEBOLD
FLEX-SITE
VISIBLE BINDERS

Multiple Flex-Site Racks house up to 10,000 records within arm's reach . . . make all binders operate as easily as one. Mobile stands are available for racks and cabinets.

For faster, easier and more economical record handling, use Flex-Site Visible Binders. There are 4-ways to signal records for special attention and follow-up. Either top or bottom margins may be exposed. Two-way shift provides for instant removal and addition of records. Flex-Site is spill-proof, and can be carried into conferences and warehouse. Get the facts. Ask for PROOF of Flex-Site superiority on large and small record systems.

Diebold®
INCORPORATED
N-333-DI 1008 Mulberry Rd., S. E. • Canton 2, Ohio
For more details circle NED-374 J7 on enclosed inquiry slip

NEW BLAST-FILTER COMBO by SLY



cuts cleaning costs of small metal parts

Combining a blast cabinet and dust collector in minimum space, the Sly Blast-Filter Combo offers advantages never before obtainable in cleaning small metal parts (both ferrous and non-ferrous), in machine shops, tool and die shops and other places. It can be adapted also to soft grit blasting.

Designed to fit against a wall or in a corner, this unit has a work area 18″ x 30″ and requires a floor space only slightly larger. The height of the work area has been planned for greatest efficiency. The unit is easily accessible from two sides. The easy-lift overhead door requires no additional space. Automatic spring assures positive action. Operation is simple and easy by a spring treadle — a slight pressure of the foot starts it; lifting of foot stops it.

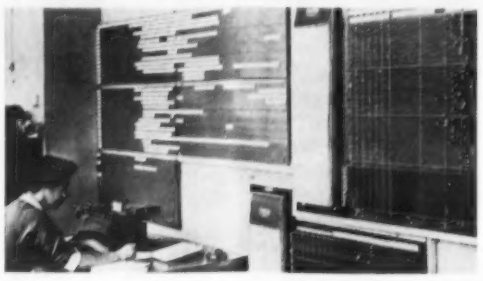
The Blast-Filter Combo has an integral, suction cloth-type dust collector. The illustration (with inspection door removed) shows the filter and its easy access. An outstanding feature is filter cleaning of air before reaching the fan thereby protecting the fan from wear. The dust hopper is available by merely unfastening five wing nuts.

Designers and Manufacturers of: Dust Control Systems, Blast Cleaning Equipment, Tumbling Mills, Industrial Ovens.

THE W. W. SLY MANUFACTURING CO. (SINCE 1879)
4748 TRAIN AVENUE • CLEVELAND 1, OHIO
OFFICES IN PRINCIPAL CITIES
For more details circle NED-375 J7 on enclosed inquiry slip

VISUAL CONTROL BOARD
shows machine load and operation, program schedules or reservations

Applications are almost unlimited for this VU visual control board which is typically used to show machine load and operation, program or promotion



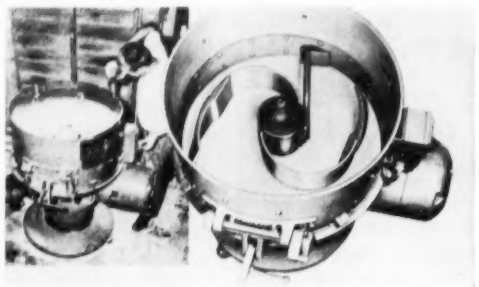
schedules, reservations, or to function as a bar or graph chart. Board consists of 30 horizontal aluminum channels in a steel frame holder and measures 36 x 14⅜ in.

Paper inserts, pen, pencil or typewritten, can be made in different colors and are offered in two heights for spanning one or two channels. They can be pushed along in the channels singly or in groups. Heavy vertical lines spaced 4 in. apart provide nine major divisions, each of which is divided in half by a lighter line. Only ½-in. thick, boards can be hung side by side or one on top of another. Made by **Wassell Organization, Inc.**, Dept. NE, 11 Sylvan Rd., Westport, Conn.

For more details circle NED-376 J7 on enclosed inquiry slip

GRANULAR MIXER
for rapid, uniform blending

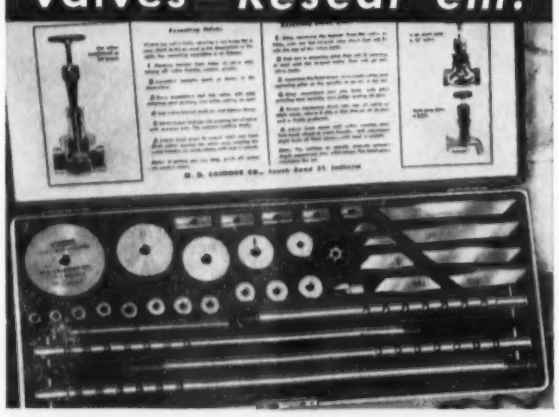
Flexible spring steel arms of the Whirlmix "rubbing action" mixer move granular material from the center to sides of the mixer where the rubbing action takes



place. Contour of arms causes material to move upwards as it is squeezed until it falls back into the pan to go through another mixing cycle. Action does not heat or crush grains. Illustrated model 375 for 4-cu ft batches has a 28-in. high discharge door for a 3-cu ft wheelbarrow. Drive is by a totally enclosed, fan cooled, 5-hp motor, directly connected to a gear reduction unit. Other models mix 1¼ to 8-cu ft batches. Made by **Federal Foundry Supply Co.**, 4603 E. 71st St., Cleveland 5, O.

For more details circle NED-377 J7 on enclosed inquiry slip

Don't junk leaky valves – Reseat 'em!



Pays for itself on the first 2 jobs!

Reseats flat and tapered seat globe or angle valves—all bibbs, faucets—quickly and accurately. The saving, over tearing out and renewing leaky valves and fixtures, is tremendous.

Cutters operating under screw feed, leave worn, scored seats glass smooth, level, absolutely tight. The cutter rotates on a level plane and is advanced by slight turns of the feed screw until the job is done.

A guide pilot centers each cutter; a tapered cone centers each spindle. Perfect alignment is inevitable. Cutters guaranteed. Write for literature!

2″ for ¼″ to 2″ valves and ¼″ to ¾″ bibbs . . $47.75
3″ for ¼″ to 3″ valves and ¼″ to ¾″ bibbs . . $62.50

M. B. SKINNER CO., South Bend 21, Ind.—Established 1898
For more details circle NED-378 J7 on enclosed inquiry slip

For Leadership in Electrical Contacts Look to
General Plate

Extensive new facilities are now completed and in operation at General Plate, offering customers a single source for an almost infinite selection of new and useful types and sizes of electrical contacts.

Here are but a few of the new ideas in contacts that have been developed commercially at General Plate.

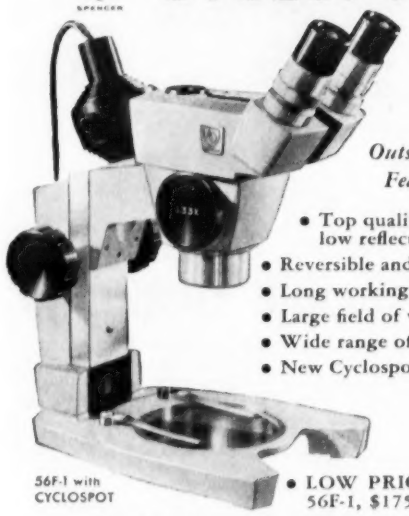
- **Clad Electrical Contact Tapes** — designed for high speed mechanized assembly
- **New Metal Bonding Processes** — offer improved contact materials
- **Trimetal Clad Projection Welding Contacts** — a copper conductor between contact face and backing
- **New Clad Button Projections** — designed and produced to meet your specific application requirements
- **New Silver Clad Rivets** — put silver where it is needed
- **Single and Double Inlay-Overlay-Top-lay** — made by G.P.'s new exclusive P.T. cladding process

With 41 years of General Plate metal cladding experience behind the emphasis now being put on G.P. electrical contacts, it will pay you to investigate. Technical data bulletins are available on request.

You can profit by using General Plate metals

METALS & CONTROLS CORPORATION
General Plate Division 1809 Forest St., Attleboro, Mass.
For more details circle NED-379 J7 on enclosed inquiry slip

NEW STEREOSCOPIC MICROSCOPES!
SPENCER CYCLOPTIC



Outstanding Features:

- Top quality optics... low reflection coated
- Reversible and inclined body
- Long working distance
- Large field of view
- Wide range of magnifications
- New Cyclospot Illuminator

56F-1 with CYCLOSPOT

- LOW PRICE!...Model 56F-1, $175.00 in lots of 5

• *Broad selection of other models...some featuring the revolutionary MAGNI-CHANGER... you simply "dial-in" desired magnification.*

American Optical Company
Instrument Division • Buffalo 15, N. Y.
For more details circle NED-380 J7 on enclosed inquiry slip

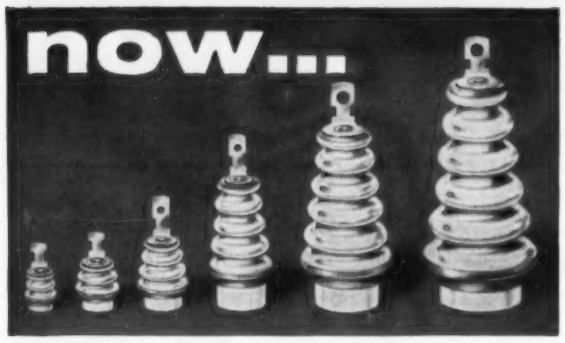
Easy to "get at"
For Inspection and Service without Disconnecting the Piping

TYPE "GS" STANDARD CENTRIFUGAL PUMPS
FOR GENERAL SERVICE
FOR CHEMICAL SERVICE

• 7 SIZES—up to 600 gal. per min. • TOTAL DYNAMIC HEAD—up to 275 ft.
• TEMPERATURE OF LIQUID—from minus 40°F to plus 350°F.
• Available from stock in ALL IRON, BRONZE FITTED, or STAINLESS STEEL Construction.

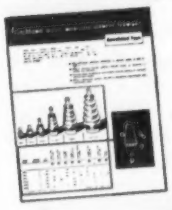
Send for descriptive folder No. 190 A

DEAN BROTHERS PUMPS INC.
EST. 1869
323 West 10th St., Indianapolis 7, Ind.
For more details circle NED-381 J7 on enclosed inquiry slip



Frenchtown Metallized Terminals!

Here is Frenchtown's improved line of Annuluted Type NICOTE Metallized Hermetic Terminals for use in controls, relays, transformers, capacitors, motors, and heater units. Custom-engineered of HIGH ALUMINA CERAMICS and metallized with our exclusive NICOTE, these terminals are available in six varying sizes with a choice of terminal hardware to fit any exacting application. Write for Engineering Bulletin 1055.



frenchtown PORCELAIN COMPANY

97 Muirhead Avenue Trenton 9, New Jersey

For more details circle NED-382 J7 on enclosed inquiry slip

Prompt Service on RAYMOND Chrome Vanadium DIE SPRINGS

STOCK OR SPECIAL SIZES

MEDIUM, MEDIUM-HEAVY, HEAVY DUTY

Distributed by leading die set manufacturers

Wide variety of hole and rod sizes, lengths and deflections. Increased fatigue life. Reduced down time. *Write for specifications and price list, and name of nearest distributor.*

RAYMOND Manufacturing Co.

DIVISION OF ASSOCIATED SPRING CORPORATION

DEPT. NED-1 CORRY, PENNA.

For more details circle NED-383 J7 on enclosed inquiry slip

Here is a typical SEWAGE TREATMENT plant installation. Blowers are heavy duty with a complete forced feed lubrication system.

This plant uses two size 22 x 36 blowers—7500 cfm, 6.5 psig, direct connected to sewage gas engines. The thrust bearing was especially designed to combat engine thrust, and expansion joints are designed to assure that weight of piping or misalignment will not set up a strain on the blower case.

Write for the name of the representative nearest you, or check the yellow pages of your local telephone directory.

SUTORBILT IS WELL BUILT S-6 4290

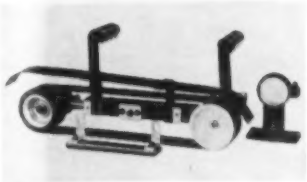
SUTORBILT CORPORATION

SUSIDIARY OF FULLER COMPANY • CATASAUQUA, PA.

5200 E. 60 St. P.O. Box 269 • Maywood, Calif.

For more details circle NED-384 J7 on enclosed inquiry slip

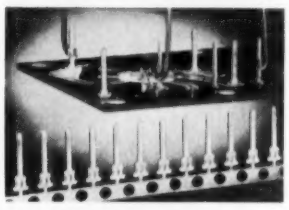
ABRASIVE BELT GRINDER is portable, high speed unit



Designed for portable or fixed bench mounting, model 2-42 abrasive belt grinder will handle any grade grit of aluminum oxide or silicon carbide abrasive in 2-in. wide belts. In portable hand use, belt flexibility allows grinding convex or flat surfaces. Belt supporting accessory is quickly attached to give rigidity to belt for flat grinding. Handles can be reversed for over or under the work grinding, or right or left hand operation. Power is supplied by a 1½-hp air motor which gives a belt surface speed of 6000 fpm. Abrasive belt is changed easily. Made by **Abrasive Machinery Corp.**, Dept. 203, 444 S. Pennsylvania Ave., Indianapolis 4, Ind.

For more details circle NED-385 J7 on enclosed inquiry slip

WIRE WRAP TERMINALS speed printed circuit assembly



Wire wrap terminals have a clinch type design which holds them firmly in the printed circuit board during automatic assembly operations and until permanently soldered. They are available in loose or chain form, the latter used with the Malcomatic lug inserter which automatically assembles 20 terminals into printed circuit boards in any pattern at rates up to 20 boards per minute. Malco single terminal inserter also uses chain form terminals. Made by **Malco Tool & Mfg. Co.**, Dept. NDC, 4025 W. Lake St., Chicago 24, Ill.

For more details circle NED-386 J7 on enclosed inquiry slip

LIGHTWEIGHT INSPECTION EQUIPMENT accurate to within 0.0002-in. T.I.R.

Magnesium and aluminum inspection equipment is one-fourth to two-fifths the weight of standard semisteel equipment. Line includes angle plates, height blocks, pattern makers angle plates, tooling angles, straight edges and parallel straight edges. Units are available in many sizes and are hand scraped to within 0.0002-in. T.I.R. Made by **Challenge Machinery Co.**, Dept. NED, 1943 Thomas St., Grand Haven, Mich.

For more details circle NED-387 J7 on enclosed inquiry slip

ECONOMY FUSE & MFG. CO., 1508 Greenview Ave., Chicago 14, Ill.

For more details circle NED-388 J7 on enclosed inquiry slip

For more details circle NED-389 J7 on enclosed inquiry slip

Brainard's New Pneumatic Stretcher and Cutter for Heavy Duty Strapping . . . offers these *Advantages*

- ★ Only Pneumatic Heavy Duty Strapping tool of its kind.
- ★ Specially designed for heavy duty strapping on pallets, skids, car bracing, and large bundles.
- ★ Pneumatic power insures uniform tension on each band.
- ★ Pneumatic power does the work. Eliminates operator fatigue.
- ★ Rugged construction assures minimum down time for tool maintenance.
- ★ Tool is light weight and portable.
- ★ Because of less operator fatigue, tool is more productive during work shift.
- ★ Operates on any flat stock or flat package.

Brainard Steel Strapping

SHARONSTEEL

Brainard Steel Division, Sharon Steel Corporation
Griswold Street, Warren, Ohio

For more details circle NED-390 J7 on enclosed inquiry slip

Stop dangerous handling of INDUSTRIAL LIQUIDS

You can stop dangerous handling of liquids with Tokheim high vacuum pumps. Their use in maintenance work will help prevent spilling, slopping, over-filling and dripping—all enemies of safety. This means your plant can be kept cleaner—work is speeded—waste halted—accidents prevented.

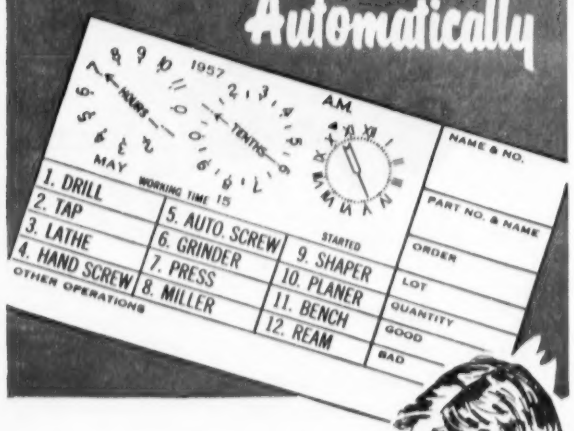
Tokheims are available with hose or spout outlets and other optional attachments. Pump operates on both forward and back strokes—delivers 20 gallons a minute. Will pump 'most anything that pours. Offered with alternate parts to handle special liquids.

Call your dealer, your Tokheim representative; write factory for literature—and approved liquid list.

General Products Division
TOKHEIM CORPORATION
DESIGNERS AND BUILDERS OF SUPERIOR EQUIPMENT
1655 Wabash Avenue SINCE 1901 Fort Wayne 1, Indiana
Subsidiaries: Tokheim N.V., Leiden, Holland—GenPro, Inc., Shelbyville, Ind.
Factory Branch: 475 Ninth Street, San Francisco 3, California
In Canada: Tokheim-Reeder of Canada, Ltd., 205 Yonge St., Toronto, Ont.

For more details circle NED-391 J7 on enclosed inquiry slip

Cost control begins with CALCULAGRAPH Automatically



No need to "just wish" you had accurate job cost records because with Calculagraph system you obtain these records automatically.

Calculagraph not only prints and records working time per worker per job but computes the *elapsed time* for every job card being recorded. That means, of course, that your costs are computed automatically. Also many workers may use the same Calculagraph computer.

Know the facts about your costs—do it with a Calculagraph system. Our representative can show you how.

Literature describing Calculagraph is yours for the asking. Just write to Dept. NE

Representatives in Principal Cities

CALCULAGRAPH Company
HARRISON, N. J.

DEPENDABLE ELAPSED TIME COMPUTERS SINCE 1892

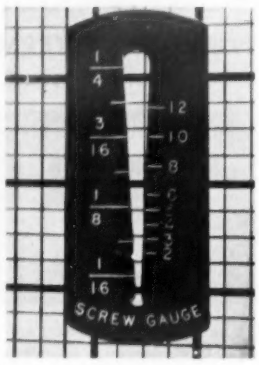
For more details circle NED-392 J7 on enclosed inquiry slip

REAMER DRIVER
holds 1/4 to 2 1/2-in. reamers

This bench - mounted reamer driver with capacity for 1/4 to 1 1/2-in. diameter reamers affords speeds of 20, 32, 56 and 85 rpm. Higher speed ranges are available. The foot - switch controlled unit has a 4-in. four-jaw universal chuck, with a three-jaw chuck offered optionally. Mechanism, including 110-v ac motor, is enclosed, and gears run in oil. Unit measures 21 1/4 x 12 3/4 x 9 3/4 in. overall and weighs 125 lb. Made by **Greaves Machine Tool Co.**, 2001-17 Eastern Ave., Cincinnati 2, O.

For more details circle NED-393 J7 on enclosed inquiry slip

SCREW GAGE
calibrates round diameters as well



Combination screw gage and diameter calibrator features improved blue-black gun metal finish. Gage will calibrate sizes of both wood and machine screws from 0 to 12 as graduated on right-hand side of V-slot. Left-hand side will gage all round diameters. It is graduated by sixteenths up to 1/4 in., however, 1/32 and even 1/64-in. diameters can be accurately estimated. Gage can be obtained free by letterhead request to **Dayton Rogers Mfg. Co.**, 2822 Thirteenth Ave. S., Minneapolis 7, Minn.

For more details circle NED-394 J7 on enclosed inquiry slip

SECRETARIAL CHAIR
seat adjusts from 16 1/2 to 22 1/2 in.

Oval-shaped backrest of the Thinline secretarial posture chair minimizes backache by conforming to the user's back. Chair also has scuff guards on the legs, foam rubber seat with waterfall front, ventilated metal seat pan and rubber covered hand-wheel for vertical and horizontal backrest adjustment. Micro-Hite seat adjusts easily from 16 1/2 to 22 1/2 in. Spring clip on backrest permits it to follow body movements. Chair is offered with soft rubber, ball bearing casters in choice of 19 colors. Made by **Royal Metal Mfg. Co.**, 171 N. Michigan Ave., Chicago 1, Ill.

For more details circle NED-395 J7 on enclosed inquiry slip

SEND FOR DETAILS ON...

Schrader AIRLINES, FITTINGS AND FERRULES

Everything you need for planning, fitting and installing your own airline hookups

Make compressed air connections that are neat and efficient, to fit your exact needs. You can plan them and install them yourself. For instance: Use Schrader oil-resistant synthetic rubber hose, cut to your specs with the fittings you need. Or buy the hose and fittings separately to make any combination you want. Seal with safe, air-tight Schrader ferrules.

SEND FOR ALL THE TECHNICAL LITERATURE YOU NEED

A. SCHRADER'S SON
Division of
Scovill Manufacturing Company, Incorporated
459 Vanderbilt Avenue
Brooklyn 38, N.Y.

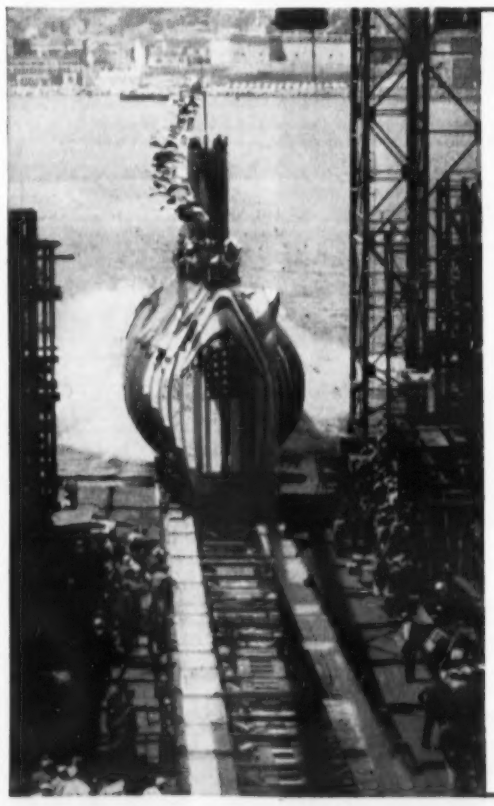
For more details circle NED-397 J7 on enclosed inquiry slip

KESTER SOLDERING FLUXES can be had in 160 different formulae, all widely proved by actual industrial use. Whatever your needs, we can supply a Flux that will give the exact results required. Kester Fluxes are available in the usual containers from 5 gallons to a pint.

Write today for Complete Flux Brochure

KESTER SOLDER COMPANY
4249 Wrightwood Avenue, Chicago 39, Illinois
Newark 5, New Jersey • Brantford, Canada

For more details circle NED-398 J7 on enclosed inquiry slip



New Atomic-powered SKATE equipped with Fulflo Filters

When the *Skate*, U. S. Navy's newest atomic submarine, slid down the ways, she was equipped with Fulflo Filters.

When you need dependable micronic filtration, you, too, can rely on Fulflo Filters. They are engineered to your exact requirements — for all types of industrial fluids: oils; liquid chemicals; water; liquid fuels; lacquers, paints, thinners; compressed air, CO_2 and other gases. Standard models meet all normal operating conditions. Special filters can be engineered for full-flow filtration up to 2000 gpm or pressures as high as 5000 psi, at minimum pressure drop. Wide variety of filter elements and containers is available.

Call on Commercial for dependable micronic filtration. For technical literature or engineering assistance, address Department NE

COMMERCIAL FILTERS CORPORATION
MELROSE 76, MASSACHUSETTS

Plants in Melrose, Massachusetts and Lebanon, Indiana

For more details circle NED-396 J7 on enclosed inquiry slip

WITH THE Nissen MARKER

A handy, easy-to-use, ball-point marker for coding, numbering, marking on metal, wood, plastic and glass—smooth or rough surfaces. The tube contains a special, fast drying *opaque* ink that withstands heat and weathering under adverse conditions and will not chip, peel, fade or rub off.

Three different size ball points are available for making fine or broad lines—as illustrated.

Line 5/64" Thick
Line 1/8" Thick
Line 3/16" Thick

JOHN P. NISSEN, JR. CO., *Manufacturers*
GLENSIDE, PA.

For more details circle NED-399 J7 on enclosed inquiry slip

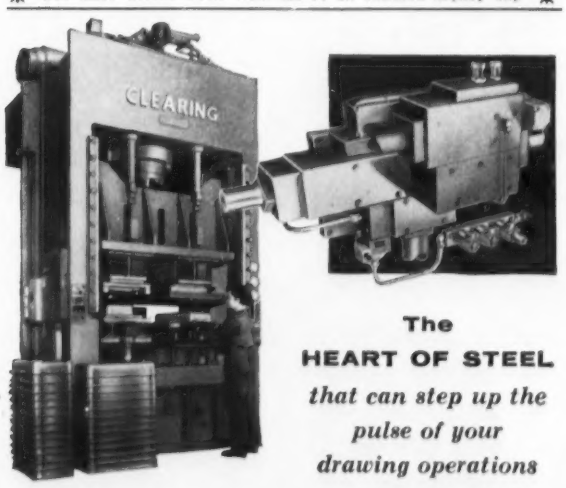
TYGON GASKETS *Resist* CHEMICAL ATTACK

Tygon plastic is tops for gasketing in acid handling service. Tough, flexible, highly resistant to acids and alkalies. Available in sheets, tubes or solid cord from which you can cut your own gaskets quickly and inexpensively. 65E

Plastics and Synthetics Division
U. S. STONEWARE
Akron 9, Ohio

WRITE *for* BULLETIN G-520

For more details circle NED-400 J7 on enclosed inquiry slip



The HEART OF STEEL *that can step up the pulse of your drawing operations*

Because a hydraulic press raises havoc with pipe joints and valve connections, Clearing designed the compact operating valve shown above. This solid steel unit reduces the amount of intervalve piping required and simplifies inspection and servicing.

Investigate Clearing hydraulic presses. Find out about the new high speed approach and return stroke cycles and the remarkable tonnage and stroke control that step up production rates. Write for Clearing Hydraulic Press Bulletin No. 231.

CLEARING PRESSES THE WAY TO EFFICIENT MASS PRODUCTION
CLEARING MACHINE CORPORATION *division of U. S. Industries, Inc.*
6499 West 65th Street, Chicago 38, Illinois

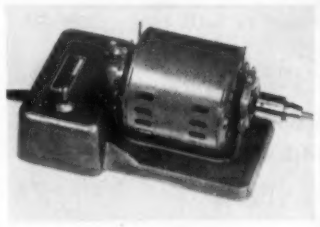
For more details circle NED-401 J7 on enclosed inquiry slip

REFRACTORY & CEMENT GUN handles 30 to 160-lb bulk densities

Nozzle controls on this refractory and cement gun allow one-man operation of material, air and water flow. Guns are offered in four sizes to fit the needs of all cupola and electric furnace operations. Their material capacities are 1700, 3000, 4300 and 5600 lb, respectively. Guns will handle most granular cement-like materials from 30 to 160-lb bulk density. Made by **Ridley & Co.**, 11275-A Massachusetts Ave., Los Angeles 25, Calif.

For more details circle NED-402 J7 on enclosed inquiry slip

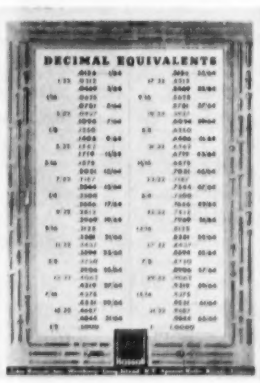
WIRE STRIPPER removes film type insulations



Film type insulations are removed from wire leads of spring wound coils and electrical components by this model 22 nose type wire stripper. Unit handles wire gage size from AWG No. 10 to No. 25. Stripping insert is a four-bladed, spring collet type cutter, arms of which are just flexible enough to allow cutting through and removing insulation without damaging the conductor. Insert is held in machined collet holder and adjusts readily to various wire gages. A single setting of insert will strip a range of several wire sizes equally well. Made by **Carpenter Mfg. Co.**, Dept. F, Box 217, DeWitt 14, N. Y.

For more details circle NED-403 J7 on enclosed inquiry slip

DECIMAL EQUIVALENT CHART measures 16 x 23 in., is easily read



Highly readable three-color decimal equivalent chart features two-column arrangement to allow enough space for large-size numbers. Decimals run down center of each column with 64ths to the right and 32nds and 16ths to the left,, in staggered formation. The 64th units are in black, 32nds in blue and the 16ths in red. Decimals are carried to four places. Chart measures 16 x 23 in. Offered free by **John Hassall, Inc.**, Box 2178A, Westbury, N. Y.

For more details circle NED-404 J7 on enclosed inquiry slip

Powered by the press ram... independent of the die

3 SIZES. Cuts steel up to 3/32" thick.

3" WIDE $69 6" WIDE $95 12" WIDE $195

Guaranteed — money back if not 100% satisfied

New LOW prices on the JACO AUTOMATIC STOCK REEL

WRITE FOR FULL DETAILS TODAY!

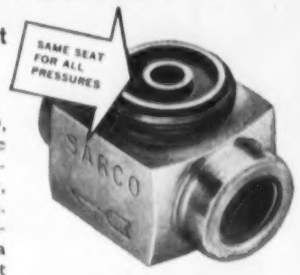
Dealer Inquiries Invited

JACO DEVICES, INC.
95 HIGH STREET • HINGHAM, MASS.

For more details circle NED-405 J7 on enclosed inquiry slip

SELF-ADJUSTING STEAM TRAP!

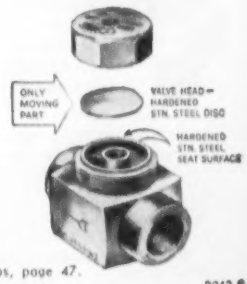
One large capacity seat for all pressures — 10 to 600 psi



Yes, in each size Sarco TD, you use exactly the same large capacity seat . . . for all pressures 10-600 psi . . . for heavy, light or no condensate loads. *Self-adjusting* throughout entire pressure range . . . not a single change or adjustment required.

Inventory simplified-reduced

No need to stock seats and heads for various loads and pressures.



60-day trial convinces

We'll send you Sarco TD steam trap, strainer. No cost or obligation. Buy *only* if completely satisfied. Advise size—3/8, 1/2, 3/4 or 1"—and use. Sarco Co., Inc., Empire State Bldg., N.Y.C. See other Sarco ad on Steam Traps, page 47.

2243-F

SARCO Thermo-Dynamic STEAM TRAP

THE MODERN TRAP THAT IS MAKING STEAM TRAPPING HISTORY!

For more details circle NED-406 J7 on enclosed inquiry slip

Your tools are never in the way—never out of reach—

THOR SAFETY BALANCERS

...and here are two new Thor balancers at a new low price

NEW 5 LB. MODEL

NEW 10 LB. MODEL

NEW 5 LB. MODEL: Maximum Capacity, 5 lbs. • Minimum Capacity, 0 lbs. • Travel, 6 ft. • Weight, 3 5/8 lbs. • Hook-to-Hook Distance, 11 7/16" • Suspension, In-Line Hook-to-Hook.

NEW 10 LB. MODEL: Maximum Capacity, 10 lbs. • Minimum Capacity, 1 lb. • Travel, 6 ft. • Weight, 3 5/8 lbs. • Hook-to-Hook Distance, 10" • Suspension, Tangential (For Minimum Cable Wear).

Thor safety balancers put tools right where the operator wants them—out of the way when not in use, on the work when in use. Put Thor balancers to work for you. Suspend tools, inspection equipment, blow guns and other equipment. Your Thor distributor will be glad to demonstrate. Thor Power Tool Co., Prudential Plaza, Chicago 1, Ill.

Thor PORTABLE POWER TOOLS

THOR POWER TOOL COMPANY
CHICAGO
Branches in all principal cities

For more details circle NED-407 J7 on enclosed inquiry slip

GET automatic LIQUID DENSITY CONTROL WITH THE PRINCO DENSITROL

The DENSITROL is an extremely accurate, sensitive instrument for continuously, accurately and automatically controlling or recording the blending, mixing, separation, dilution or concentration of industrial process liquids. It quickly pays for itself because it eliminates operator attendance and does on a continuous basis what formerly was done on a batch basis.

For ranges, calibrations and other specifications, write, wire or call.

PRECISION THERMOMETER & INSTRUMENT CO.
1434 BRANDYWINE STREET • DEPT NED • PHILA. 30, PA. • RI 6-6671

For more details circle NED-408 J7 on enclosed inquiry slip

CUT HANDLING COSTS - - - STOCK MORE IN LESS SPACE

LOW-COST, STACKBIN-IN-STACKRACK UNITS PAY FOR THEMSELVES IN 3 WAYS

SAVE SPACE — Individual units stack easily and lock securely as high and as long as you need. Seven different size units available.

SPEED PRODUCTION — Stackbins reduce handling time. Can be used intra-plant in processing, sub-assembly, assembly and stockroom. Roller Bearing Slide Stackracks available for heavier contents. Locking Pallets supplied for unit load handling.

REDUCE INVENTORY TIME — Accessibility of Stackbins for weight count speeds inventory taking; visibility of contents simplifies control.

STACKBIN-IN-STACKRACK COMBINATIONS are made of heavy gauge steel with all welded construction and baked enamel finish.

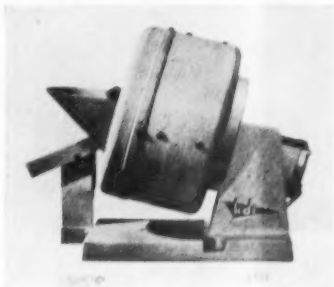
LOW-COST STACKBIN PRODUCTS ARE SOLD DIRECT — A factory trained, Stackbin Sales Engineer will study your plant requirements, at no obligation, and will make specific recommendations for handling and storage efficiency. Buy only as many units as you need.

WRITE TODAY FOR FULL INFORMATION
STACKBIN CORP. 1081 Main St., Pawtucket, R. I.
Mfd. & sold exclusively in Canada by: Wickware-Stackbin, Ltd., Ottawa

STACKBIN SYSTEM "Stacked and Still Accessible"

For more details circle NED-409 J7 on enclosed inquiry slip

HOPPER FEEDER for small metal and plastic parts



Supplied with brackets, buckets and pan, and requiring only the user's chuting, the KDI 110 special drum hopper is designed for high rate orienting and feeding of small metal and plastic parts. It is quickly and easily tooled to feed headed fasteners, nuts, rivets, wire terminals and other small parts at rates up to 150 pieces per minute. Cast aluminum base and mounting plate supports a 10-in. diameter steel drum with 100-cu in. capacity. Drum is driven through enclosed spur gears by a high-torque Barber-Colman gearhead motor. Rubber lining is optional. Standard tooling components can be furnished. Price of basic unit is $195. Made by **KDI Corp.**, 950 Exchange St., Rochester 8, N. Y.

For more details circle NED-410 J7 on enclosed inquiry slip

ELECTRIC LIFT TRUCK in 1000, 2000 and 3000-lb capacities

Re-engineered Hustler PUG electric lift trucks in 1000, 2000 and 3000-lb capacities are extremely maneuverable. Only 60 in. long, truck has a turning radius of 52 in. for use in narrow aisles and cramped quarters. It has four forward speeds up to 6 mph, plus reverse, all with automatic governor control. A dead-man brake is incorporated in the mechanical braking system. Unitized power and drive unit is readily serviced. Truck is normally furnished with an adjustable pallet fork with tilt range from 10 degrees rear to 3 degrees forward, and mast height ranges from 6 ft up. Attachments include hydraulic side-shifting fork, boom crane, fork extension and overhead guard. Made by **Hustler Corp.**, 17599 Elm Rd., Willoughby, O.

For more details circle NED-411 J7 on enclosed inquiry slip

Surface Treatment of Metals

E. F. Houghton & Co.—The latest materials and methods developed for the surface treatment of metals are discussed in 84-page booklet. This handbook covers rust prevention, mechanical and chemical cleaning, blackening, phosphating and other metal surface treatments. Products available for this purpose are described.

For more details circle NED-412 J7 on enclosed inquiry slip

Clippard's NEWEST MINIATURE AIDS TO AUTOMATION!

The pioneer manufacturer of miniature pneumatic devices proudly presents a broad new line of small, but mighty, air components. We are sure you will find them most useful in automatic control and work feeding operations and new end products . . . especially where space or weight is a problem!

Included are new ⅜" bore single and double ram double acting cylinders in 1, 2, 3, 4, 5 and 6-inch strokes; improved spring return cylinders; two and three way air valves and many clever new interchangeable fittings and accessories you have asked for. All are precision made and life tested for millions of cycles of trouble-free operation.

Clippard miniature pneumatic devices have established an enviable "in use" reputation with America's most progressive manufacturers, large and small. You will find them equally dependable, sturdy and easily mounted . . . indispensable for speeding production and improving work quality . . . AUTOMATICALLY!

WRITE NOW FOR NEW CATALOG!

Clippard INSTRUMENT LABORATORY, INC.
7356-N Colerain Road, Cincinnati 24, Ohio
Manufacturers of R.F. Coils, Electronic Equipment, Miniature Pneumatic Devices

For more details circle NED-414 J7 on enclosed inquiry slip

WHY WISE BUYERS SPECIFY...

PROTECTION FOR WIL-GARD THE HANDS OF INDUSTRY

NATURAL RUBBER ACID GLOVES

WIL-GARD GAUNTLET-TYPE ACID* (left) and REINFORCED FIRMHOLD Industrial Gloves (right) are compounded to withstand long, punishing service in many industrial applications. High rubber content insures maximum pliability under all working conditions. Hand-fitting, curved-finger styling (a Wil-Gard first) provides real comfort and flexibility. Wide selection of sizes, weights, and lengths.

Sold only through distributors

Send for FREE 1957 CATALOG! - TELLS HOW TO CHOOSE THE RIGHT GLOVES FOR MOST INDUSTRIAL USES.

*Linemen's rejects . . . slight surface irregularities in no way affect their performance.

WR-867-16

The Wilson Rubber Company
INDUSTRIAL DIVISION • CANTON 6, OHIO
A Division of Becton, Dickinson and Company

For more details circle NED-415 J7 on enclosed inquiry slip

Here's how to decrease harmful machine VIBRATION

Machine downtime, quality control problems, shortened machine life and loss of precision—*all* can be caused by excessive vibration. To avoid these costly hazards, machines should be *set* level . . . *kept* level . . . and *re*-leveled periodically. *How?* Equip your machines with EMPCO Leveling Jacks! EMPCO Jacks facilitate machine installation and set-ups . . . assure smooth, positive adjustment . . . provide dependable support for machine tools, large surface plates, automation lines, tool room and production equipment of all types.

VI-SORB MOUNTING PADS GIVE EXTRA PROTECTION

VI-SORB Mounting Pads provide extra protection—reduce the transmission of internal machine noises throughout the building structure and check transmitted vibrations from one machine to another. They retard machine creepage and frequently eliminate the need for anchor bolts. VI-SORB Pads do not breakdown under repeated impact loads or deteriorate with age. They resist oils, greases, acids. Available in thicknesses to meet specific conditions and cut to fit EMPCO Jacks. Set your machines level, keep them level, *freer of vibration*, with EMPCO Jacks and VI-SORB Mounting Pads!

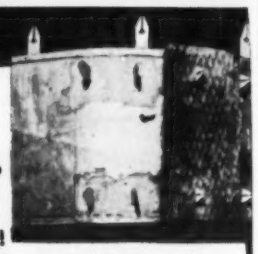
EMPCO LEVELING JACKS

Empco Leveling Jacks
Available in Six Styles—25 Models
Capacity-Rated to 20 Tons!

Write today for descriptive Bulletin No. 100

THE ENTERPRISE MACHINE PARTS CORP., 2727 Jerome Avenue, Detroit 12, Mich.

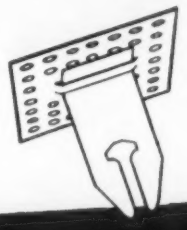
For more details circle NED-413 J7 on enclosed inquiry slip



INSULATION INSTALLATIONS

FASTER — EASIER — COST LESS!

Anchors by Stic-Klips®



Stic-Klips® are time and labor saving anchors and fasteners for attaching insulation, strapping, metal lath, wall fixtures, wiring and conduit to curved or flat metal or masonry surfaces. Stic-Klips® feature no surface drilling, quick fastening, no fire hazard and a strong positive bond.

Send for free illustrated folder.

Stic-Klip® MANUFACTURING COMPANY, INC.

64 Regent Street • Cambridge 40, Massachusetts

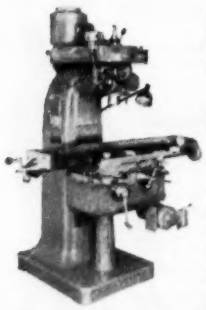
▲ For more details circle NED-416 J7 on enclosed inquiry slip ▲

Produce MORE... Produce it BETTER!

ON THESE IMPROVED ECONOMICAL

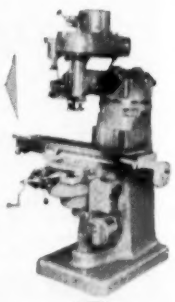
INDEX VERTICAL MILLS

Super "55" MILL



1½ HP Head or optional 2 HP with continuous duty motor gives 50% or more capacity . . . More rigidity, more accuracy . . . Increased horse power and dynamically balanced Cast Iron Pulleys and Drive System afford improved production capacity . . . More weight in the column, heavier ribbed column, heavier knee, heavier saddle.

"45" MILL



Unique square design of overarm affords more rigidity, greater accuracy . . . Provides extra range and capacity . . . More power at the cutter. No adjustment required on overarm and head after use . . . No need to re-indicate head after moving overarm . . . Speed range with nine changes makes possible the use of high speed or carbide tipped cutters to best advantage.

INDEX MACHINE CO.

839 N. MECHANIC STREET JACKSON, MICHIGAN

▲ For more details circle NED-417 J7 on enclosed inquiry slip ▲

SAMPLING TIME slashed...

. . . by Small-Scale Duplication of Full-Scale Production!

12-PAGE BULLETIN PROVES IT!

SEE how exclusive "OPEN-DOOR" design makes cleaning and maintenance quick and easy . . . how rugged construction keeps equipment running round the clock for years.

COMPARE the capacities and performance of Sturtevant Roll Jaw Crusher, Crushing Rolls, Swing Sledge Mills and Sample Grinder with what you are now using.

LEARN why the "blue chips" in industry and education prefer Sturtevant Laboratory Equipment.

WRITE FOR 12-PAGE BULLETIN on Sturtevant Laboratory Equipment and other custom-built equipment listed below. STURTEVANT MILL CO., 114 CLAYTON ST., BOSTON 22, MASS.

STURTEVANT

Dry Processing Equipment

The "OPEN-DOOR" to lower operating costs over more years

CRUSHERS • GRINDERS • MICRON-GRINDERS • SEPARATORS
BLENDERS • GRANULATORS • CONVEYORS • ELEVATORS

▲ For more details circle NED-418 J7 on enclosed inquiry slip ▲

ELAPSED TIME METER
logs total machine operating hours

Square face, alternating current hour meter logs total hours of machine or equipment operation. It is available in 120, 240 or 480-v, 50 or 60-cycle ratings. It has large, legible figures. Made by **John W. Hobbs Corp.**, 2074 Yale Blvd., Springfield, Ill.

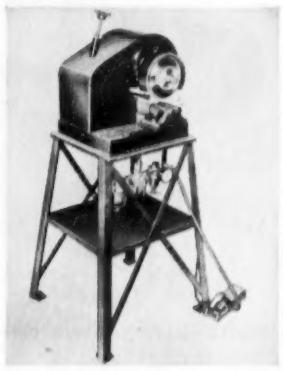
▲ For more details circle NED-419 J7 on enclosed inquiry slip ▲

SWITCH-FAN COMBINATION
for use in single-phase motors

Syncro-Snap centrifugal switch has been incorporated into a die-cast cooling fan to form a single-piece component which accomplishes both cooling and starting winding cut-out functions in single-phase motors. It is also suitable where cooling is required in conjunction with speed detection. The Syncro-Fan switch is composed of a conically-shaped disk to which centrifugal weights are fastened, a plastic insulating spool which is an integral part of the disk and a fan casting which holds switch mechanism in correct position. Switch action is determined by speed alone, regardless of voltage or load. Life expectancy is up to 3 million cycles. Made by **Torq Engineered Products, Inc.**, 30 W. Monroe St., Bedford, O.

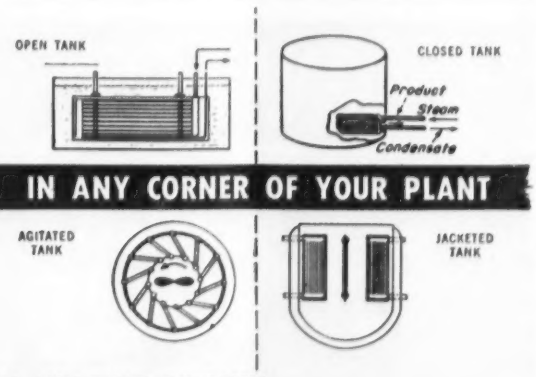
▲ For more details circle NED-420 J7 on enclosed inquiry slip ▲

CUTOFF MACHINE
cuts ⅜ to 1¼-in. pipe and tube



Up to 2000 pieces of pipe and tube, ranging in size from ⅜ to 1¼ in. OD in light-gage to 16-gage wall thickness, can be cut hourly on this air-operated rotary cutoff machine. Operator feeds the pipe or tube to a preset stop, touches the air valve foot switch and the rotary blade descends at the desired cutting speed to make a clean, smooth cut. A handle can be attached for intermittent manual operation. Adjustable pipe and tube support table with nylon fork rollers to minimize scoring is available. Made by **Continental Machine Co.**, 1954 N. Maud Ave., Chicago 14, Ill.

▲ For more details circle NED-421 J7 on enclosed inquiry slip ▲



IN ANY TYPE OF TANK PLATECOIL® CUTS HEAT TRANSFER COSTS

Use Platecoil heat transfer units singly, in series or in banks. Install them on end, flat or on their sides. Compact, light in weight and high in efficiency, they fit in any type of tank, do a better job and save money compared to old-fashioned pipe coils.

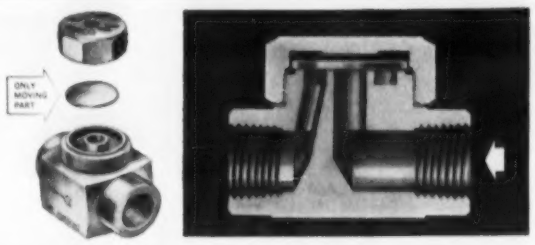
Fast delivery from stock

Write today for your copy of Bulletin P-57.

PLATECOIL® Division Trantec Mfg. Inc. LANSING 4, MICHIGAN

You'll find our catalog in Sweet's Plant Engineering file

▲ For more details circle NED-422 J7 on enclosed inquiry slip ▲



SIMPLEST STEAM TRAP

Trouble-free design practically eliminates maintenance

1. *No complicated mechanism!* Look at the cross-section above. Not a pin, lever, gasket or bucket in sight! There aren't any . . . in the practically trouble-proof Sarco TD . . . simplest of all steam traps.

2. The kinetic energy of steam closes the valve. No mechanism needed.

3. Only 3 simple, rugged parts (not assemblies) . . . made of stainless steel. Only 1 moving part.

4. No narrow channels to choke. No gaskets to leak.

Ask for 60-day trial

We'll send you Sarco TD steam trap, strainer. No cost or obligation. Buy *only* if completely satisfied. Advise size—⅜, ½, ¾ or 1"—and use. Sarco Co., Inc., Empire State Bldg., N. Y. 1, N. Y.

2242-F

See other Sarco ad on Steam Traps, page 45.

SARCO Thermo-Dynamic STEAM TRAP

THE MODERN TRAP THAT IS MAKING STEAM TRAPPING HISTORY!

▲ For more details circle NED-423 J7 on enclosed inquiry slip ▲

the original DOUBLE-ACTION

Go-Jo

REG. U. S. PAT. OFFICE

HAND CLEANER

REMOVES GREASE AND GRIME—all Stubborn Soil IN ½ THE TIME

. . . easier
. . . faster
. . . safer

Cuts HAND CLEANING COSTS 50% AND MORE

saves time
saves money

The First and Only Fully Automatic "ONE SHOT" DISPENSER

Amazing double-action cleaner—may be used with or without water—provides the best in fast action, removal of grease, grime, paint, ink, asphalt—all stubborn soil. No harsh abrasion — guards against Dermatitis — soothing, safe protection for the skin.

Proven highest time-saving efficiency with "one-shot" dispenser — gives just the right amount every time — convenient replaceable throw-away can. It's time you investigated Go-Jo.

GET DETAILS

Send for information to Dept. N.
GOJER, INC., Box 991, Akron, Ohio

Name_____ Title_____
Company_____
Address_____
City_____ State_____

America's Largest Manufacturer of Creme Type Hand Cleaners

▲ For more details circle NED-424 J7 on enclosed inquiry slip ▲

Brand new—from Porter-Cable!

greatest all-purpose saw ever made!

—will actually plunge cut right through the side of a house!

Porter-Cable's new Multi-Saw cuts almost *any* "cuttable" material faster! It plunge cuts without a starting hole—has ¾" capacity in aluminum, ¼" in steel.

You get these exclusive features: orbital-action for faster cutting, offset blade to allow "close" cutting within ⅝" of walls and uprights, T-shaped forward handle for complete control of tool even in awkward cutting positions. And with precision ball bearings throughout, it operates almost without vibration.

See the new Multi-Saw at your Porter-Cable dealer—or write for full information now!

PORTER-CABLE MACHINE COMPANY
7129 N. Salina St., Syracuse 8, N. Y.
saws • drills • sanders
routers • shapers • planes

Porter-Cable
Quality Power Tools

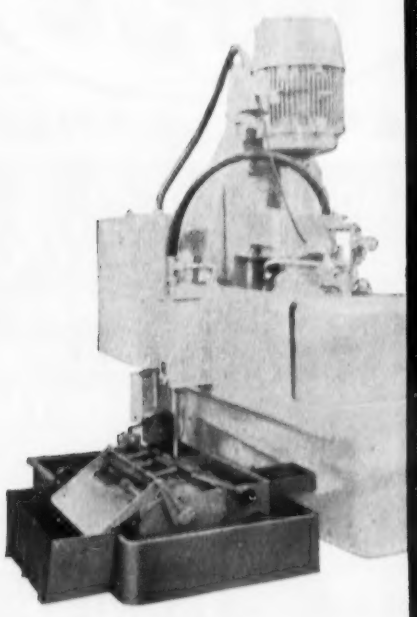
In Canada: write Porter-Cable Ltd., Box 5019, London, Ont., Canadian prices slightly higher.

For more details circle NED-425 J7 on enclosed inquiry slip

BARNESDRIL

magnetic separator saves $152.50 weekly

...on grinding operations



WEEKLY COST COMPARISON BEFORE AND AFTER INSTALLING A BARNESDRIL MAGNETIC SEPARATOR

	Before	After
Labor Consumed Cleaning Coolant System @ $1.00 per hr.	$ 12.00	$ 2.00
Time Lost by Machine Operator @ $1.50 per hr.	18.00	3.00
Coolant Compound Used @ $1.50 per gal.	21.00	4.50
Cost of Wheel prorated weekly	37.50	26.50
Machine downtime @ $10.00 per hr.	120.00	20.00
Totals	$208.50	$56.00
Total Weekly Savings	**$152.50**	

● An Eastern manufacturer installed a BarnesdriL Magnetic Separator on a Hanchett Grinder. After the separator had been in operation approximately a year, they compared grinding costs against the costs previous to the separator installation. These figures showed a weekly savings of $152.50.* The installation cost was returned in savings in less than 6 weeks.

All coolant from the grinder continuously recirculates around the drum of powerful permanent Alnico Magnets in the separator. Swarf, chips, and other ferrous particles are removed resulting in the decreased grinding costs shown. Not shown, but important factors are, the decrease of dermatitis and improved finish of ground parts.

For complete information about BarnesdriL Magnetic Separators, call your BarnesdriL Representative or write for Bulletin No. 300Y.

BARNES DRILL CO.
866 CHESTNUT STREET • ROCKFORD, ILLINOIS
DETROIT OFFICE: 3419 South Telegraph Road

50th year

For more details circle NED-426 J7 on enclosed inquiry slip

TUBULAR FILES

hold 60-in. tracings and blueprints

Tracings, maps, and blueprints up to 60 in. wide are held by this confidential-type Tubefile available in locking one and two-door styles. Tubes are on a rocker base which tilts them outward. Usually 112 in number, tubes are indexed for fast location of filed item. Files are also available in custom-built wood cabinets to match executive office decor. Made by **Scott-Rice Co.**, Dept. A, 610 S. Main, Tulsa 3, Okla.

For more details circle NED-427 J7 on enclosed inquiry slip

DECIMAL EQUIVALENT CHART

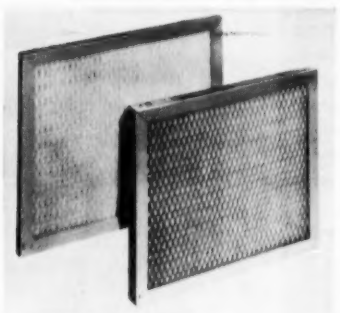
large numerals are easy to read

This two-color wall chart of decimal equivalents features large, easy-to-read numerals. Charts are metal reinforced at both top and bottom, and a brass eyelet is provided for hanging. Surface is plastic coated for long life. Chart is offered free by **Peninsular Steel Co.**, Dept. D, Box 3853, Detroit 5, Mich.

For more details circle NED-428 J7 on enclosed inquiry slip

WASHABLE PLASTIC FILTERS

clean air electrostatically also



Made of a plastic filtering material which has electrostatic dust-collecting properties, Skuttle-Aire permanent air filters are readily cleaned by washing them in cold running water. Riveted aluminum frame contains four layers of thermoplastic filtering media between expanded metal grills. They are available in ten standard 1-in. sizes from 10 x 20 in. to 15 x 30 in. and in 38 standard ½-in. sizes from 6 x 20 in. to 14⅝ x 23¼ in. Special sizes can be furnished. They are usable in heating, ventilating, dust collecting, air conditioning and other equipment. Made by **Skuttle Mfg. Co.**, Dept. H, Milford, Mich.

For more details circle NED-429 J7 on enclosed inquiry slip

Only TALK-A-PHONE OFFERS

6 STATION SELECTIVE Wireless INTERCOM

Plus Selective Paging with Reply

NO INSTALLATION
JUST PLUG IN AND TALK

Featuring TALK-A-PHONE'S exclusive "SONIC-GATE" circuit, which effectively suppresses line noises and hum while system is in actual operation, as well as when in Stand-By position.

This new versatile Wireless Intercom System will provide dependable, trouble-free intercommunication for office, factory, institution, home or anywhere. Using six master stations, 3 separate 2-way conversations can be held simultaneously. Any Master Station can page as many as ten wireless staff Stations simultaneously, in addition to all regular intercommunication features.

TALK-A-PHONE — Saves Time — Steps — Money!

Whatever your intercommunication needs — one Master and Sub Stations; all Master Stations; or a combination of Masters and Sub-Stations; TALK-A-PHONE has them all.

From 2 to 100 Stations—it's TALK-A-PHONE . . .

For complete literature . . . write to

TALK-A-PHONE CO.

Dept. NE-9, 1512 S. Pulaski Road, Chicago 23, Illinois

For more details circle NED-430 J7 on enclosed inquiry slip

NEW 10,000-lb truck is *Right* for the job!

the new Allis-Chalmers Model FT-100

Heavy-duty industrial engine is built *by* Allis-Chalmers specifically *for* lift truck service — provides high torque at normal engine speeds — *power enough to carry a full load up a 25 percent grade.*

Workingest truck in its class. The FT-100 has the extra weight, traction and operator controls for superior performance.

Rugged industrial-type frame has welded construction. New roller-mounted "extra lift" mast provides up to 19 percent higher lift without increasing over-all lowered height. Let your Allis-Chalmers material handling dealer tell you more. Send for new Bulletin BU-334A.

ALLIS-CHALMERS, MATERIAL HANDLING DEPT.,
BUDA DIVISION, MILWAUKEE 1, WISCONSIN

ALLIS-CHALMERS

BH-54

For more details circle NED-431 J7 on enclosed inquiry slip

What is your LUBRICATING PROBLEM?

CMD

- ☐ **LATHE CENTER LUBRICATION** *SCORING-GALLING*
- ☐ **GRINDING CENTERS** *LUBRICANT WASHOUT*
- ☐ **STEADY RESTS** *WORK PIECE DAMAGE*
- ☐ **PRESS FITS** *SCORING-SEIZING*
- ☐ **DRAWING** *SCORE MARKS-DIE WEAR*
- ☐ **DIE POSTS** *WEAR-FREEZING*

CMD Lube has solved many like it with excellent results. Perhaps CMD will be your answer, too!

Check and send in for sample

CMD *Anti-Scoring Lubricant*

CHICAGO MANUFACTURING & DISTRIBUTING CO.

1902 West 46th Street, Chicago 9, Illinois

For more details circle NED-432 J7 on enclosed inquiry slip

LOW COST! HIGH QUALITY!

DODGE

SLP BALL BE[illegible] PILLOW BLOCK

A serviceable bearing f[illegible] [illegible]afts and general light machinery applicati[illegible] [illegible]d steel outer housing combines pleasing a[illegible] [illegible]ce with *strength* for all moderate service. Comp[illegible], fully self-aligning, effectively sealed to exclude dust and dirt, factory lubricated for life — and sealed both on and off the shaft. Flange units also. From Distributors' stocks in shaft sizes from 3/4" to 1-3/16". Write for Bulletin A-645A.

DODGE MANUFACTURING CORPORATION, 2100 Union St., Mishawaka, Ind.

DODGE

of Mishawaka, Ind.

For more details circle NED-433 J7 on enclosed inquiry slip

PNEUMATIC POWER LETTERING PRESS

FOR STAMPING SELECTIVE LETTERING

Into DIE components and other metal parts such as tools, gauges and jigs.

Characters are selected by turning dial and are stamped into part when foot pedal is depressed. Spacing of characters is automatic.

Requires 20 to 40 pounds line pressure. Write today for further information on this or any other member of the famous GTS line.

IF IT'S WORTH MAKING, IT'S WORTH MARKING.

GEO. T. SCHMIDT, INC.
1800 W. Belle Plaine Avenue
Chicago 13, Illinois

For more details circle NED-434 J7 on enclosed inquiry slip

What other tool companies consider "SPECIALS"
(IN DECIMAL SIZES)

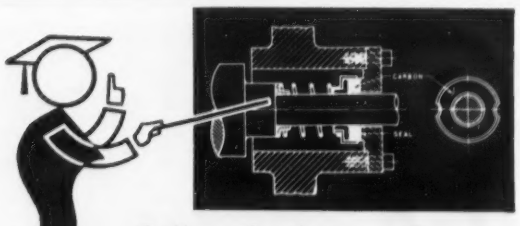
WE STOCK AS STANDARD

Thousands of chucking and Stub Reamers by the .001 in Stock ready for the precise job. Why buy or make "SPECIALS" when you can BUY from STOCK — over night.

SUPERREAM
IN EMERGENCY
Telephone
Libertyville 2-4200

TWENTIETH CENTURY MANUFACTURING CO.
BOX 429-ND LIBERTYVILLE, ILL.

For more details circle NED-435 J7 on enclosed inquiry slip



Solve design and cost problems with

CARBON-GRAPHITE!

The ideal materials for dozens of chemical, electrical, or mechanical uses

Thanks to their unique chemical, electrical and physical properties, carbon and carbon-graphite parts and components do a lot of things better, often more economically, than any other materials. Among other things, they are unsurpassed for many corrosive, high-temperature, electrical arcing, high-friction and other difficult conditions. Stackpole offers full facilities for "tailoring" carbon, graphite and metal powder grades to specific requirements. Send details of your application for recommendations.

STACKPOLE CARBON CO., St. Marys, Pa.

STACKPOLE

ANODES • GROUNDING RODS • CONTACTS • VOLTAGE REGULATOR DISCS
BEARINGS • MOLDS AND DIES • WELDING CARBONS • BRAZING BOATS
AND FIXTURES • FRICTION SEGMENTS • COLLECTOR SHOES • CLUTCH RINGS
PUMP VANES . . . and dozens more.

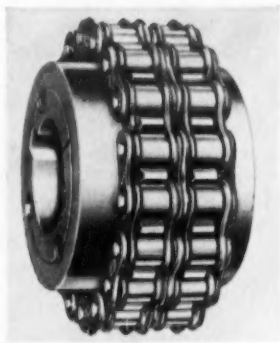
For more details circle NED-436 J7 on enclosed inquiry slip

THERMAL SWITCH
sealed unit used in pipes, bearings

Hermetically-sealed two-wire thermal switch for use in pipes and bearings uses a bimetal element. Body is stainless steel. Switch operates in ambients from −65 to 700° F, factory set and sealed. It is rated 2 amp resistive at either 28 v dc or 115 v ac. Length over AN connector is 2 15/16 in. Unit meets environmental, shock and vibration requirements of MIL-E-5272A. Made by **Control Products, Inc.**, 306 Sussex St., Harrison 12, N. J.

For more details circle NED-437 J7 on enclosed inquiry slip

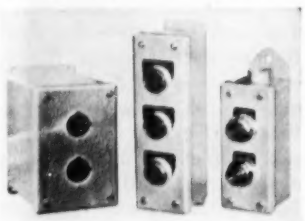
FLEXIBLE SHAFT COUPLINGS
with interchangeable taper bushings



Interchangeable taper bushings are now incorporated in Diamond steel double roller chain shaft couplings. Bushings are supplied with bores in 1/16-in. increments. Couplings are easily installed on shafts and will absorb moderate end play and misalignment. They can be coupled and uncoupled by removal of single roller chain connecting pin. Ratings from fractional to hundreds of horsepower are offered. Made by **Diamond Chain Co.**, Dept. 457, 402 Kentucky Ave., Indianapolis 7, Ind.

For more details circle NED-438 J7 on enclosed inquiry slip

PUSHBUTTON ENCLOSURES
in deep, slim and pendent models



Any regular make of oil - tight pushbutton control unit will fit these welded steel enclosures which feature oil - tight construction with gasketed covers and external mounting feet. Extra deep unit shown at left is 4¾ in. deep and provides space needed for wiring stacked or tandem pushbutton units. Ten sizes accommodate 1 to 25 pushbuttons. Slim enclosure in center is 2½ in. square and is offered in sizes to hold from 1 to 10 pushbutton units. Pendent enclosure, right, is 2½ in. square and has a conduit hub. It is suited for controlling overhead cranes. Standard sizes accommodate 1 to 8 pushbuttons. Baked gray hammertone over phosphatized surface is standard. Made by **Hoffman Engineering Corp.**, 1941 Tyler St., Anoka, Minn.

For more details circle NED-439 J7 on enclosed inquiry slip

YOUR CYLINDER ORDER SHIPPED IN 24 HOURS OR LESS! —LET CARTER CARRY YOUR INVENTORY!

CARTER CYLINDERS

AIR OR HYDRAULIC
ANY MOUNT
ANY STROKE
ANY BORE SIZE

Get your cylinders *now*. No need to lose production! Carter will *ship your cylinder order in 24 hours or less*, to satisfy your needs. And when you buy Carter cylinders, you buy quality—rugged, dependable cylinders.

Leakproof construction . . . strong key-type locking of body between tubing and heads . . . compact, space - saving design . . . *plus special delivery to you.* Get in touch with us *today* for cylinders you need *tomorrow!*

CATALOG FILE! Air Cylinders; 750 lb. Hydraulic; 1500 lb. Hydraulic; Clamp Cylinders; Air Valves; Built-in Valve Types. Complete with parts data, specifications and prices. Send today!

24 HOUR PHONE SERVICE
For fast service call CARTER: LANSING, ILLINOIS, GRanite 4-3305 or CHICAGO, BAyport 1-7186. TELETYPE LNSG, ILL 1119X.

CARTER CONTROLS INCORPORATED
2876 Bernice Road, Lansing, Illinois
Chicago Suburb

AIR CYLINDERS • AIR VALVES • HYDRAULIC CYLINDERS
ROTARY ACTUATORS • SPECIAL CONTROLS

For more details circle NED-440 J7 on enclosed inquiry slip

QUICK CLEAN RELEASE for RUBBER MOLDS

IMS

PURE SILICONE MOLD LUBE

Clean • Concentrated!
The economical way to apply costly silicone to all quality rubber molds. Quick, tool Save cycle time with handy pressurized dispenser.

PRICES (Delivered)

1 to 11 Cans, ea.	$2.00
Unbroken Doz.	$18.00
Unbroken Gross	$197.40

INJECTION MOLDERS SUPPLY CO.
3514 LEE ROAD • WYoming 1-1424 • CLEVELAND 20, OHIO

For more details circle NED-441 J7 on enclosed inquiry slip

Specify
MONARCH SOLID TIRES FOR EVERY LIFT TRUCK JOB

7504-MR

Mono-Cushion®
This high-performance tire, featuring the Monarch-developed heavy-duty lug tread, has outstanding shock absorbing capacity . . . is recommended for fragile loads and rough floors.

UNIVERSAL

An all-purpose workhorse, this utility tire is widely used for "average" lift truck jobs. It provides exceptional stability on high lifts and short turns plus good shock absorption.

TRACTION TREAD

Combining the inherent stability of a Universal with extra pulling power and traction, this lug tread tire performs for ton-mile after ton-mile at surprisingly low cost.

SPECIAL COMPOUNDS

Monarch also can supply special-purpose tires, with smooth or traction treads, on special order:
NEOPRENE . . . for extra resistance to oils, solvents, chemicals, extreme heat.
NON-MARKING . . . to eliminate smudges and skid marks on tile or painted floors.

FOR COMPLETE DETAILS, SPECIFICATIONS AND PRICES . . . ask your truck dealer, or write, for new CATALOG & HANDBOOK MR-457

THE MONARCH RUBBER COMPANY
260 LINCOLN PARK
HARTVILLE, OHIO

• 7-255 Gen. Motors Bldg., Detroit, Mich.
• 1035 Bartlett St., Hayward, Calif.

For more details circle NED-442 J7 on enclosed inquiry slip

BUFFING or POLISHING with a BUCKEYE Air Tool is

EASIER
Buckeye buffers and polishers are compact, lightweight and perfectly balanced for ease of handling.

FASTER
Buckeye buffers and polishers do all the hard work; you merely guide the tool.

BETTER
Buckeye buffers and polishers turn out a perfect job everytime, in less time, at less cost.

Start now to make your buffing and polishing work easier . . . faster . . . better. Choose from a complete range of modern Buckeye Air Tools, designed and built to help you. Catalog A-10 has complete information; may we send you a copy?

In Air Tools, Your Best Buy Is Buckeye

Buckeye Tools CORPORATION
DIVISION 34 • DAYTON 1, OHIO

For more details circle NED-443 J7 on enclosed inquiry slip

Elco SCREWS ARE GOOD SCREWS
. . . Ask a man who has used them!

ELCO SEMS

WOOD SCREWS
MACHINE SCREWS
MACHINE SCREW NUTS
TAPPING SCREWS
THREAD-CUTTING SCREWS
PHILLIPS AND SEMS SCREWS
PIPE PLUGS
STOVE BOLTS
CAP SCREWS
LAG SCREWS
DRIVE SCREWS
SPECIAL SCREWS
COLD HEADED PRODUCTS

The "Sems" method of pre-assembled screws and washers is used by ELCO to produce cost-reducing units of many kinds. Stock SEMS are made up of standard screws and washers — *special* SEMS can be designed, engineered, and produced to order as required. Let us quote on your standard requirements — send us your prints on specials. *Write for free package of samples.*

WE ALSO SPECIALIZE IN MAKING ANY OF OUR PRODUCTS OF THE FOLLOWING MATERIALS

Stainless Steel, Silicon Bronze, Bronze, Ambrac, Brass, Monel, Copper, Aluminum, Special Analysis

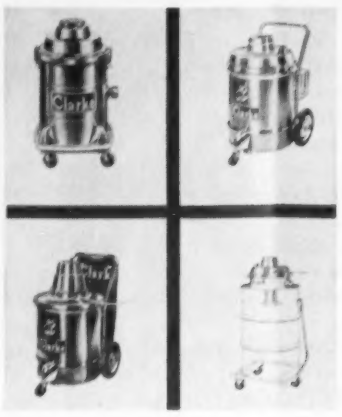
It's Always a good time to order from **ELCO**

ELCO TOOL & SCREW CORPORATION
1946 BROADWAY
ROCKFORD
ILLINOIS

ELCO SCREWS

For more details circle NED-444 J7 on enclosed inquiry slip

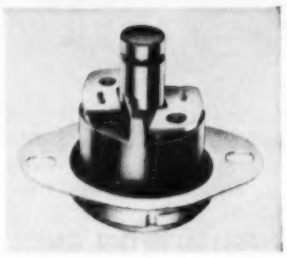
WET-DRY VACUUM CLEANERS
six models range from ½ to 1½ hp



Line of wet - dry vacuum cleaners includes six new units ranging from ½-hp model with 2½-gallon wet and ½-bushel dry capacity to a 1½-hp unit with 50 gallon wet and 6½-bushel dry capacity. Latter unit converts a 55-gallon drum into the vacuum tank. Features include stainless steel tank, polished aluminum head, quick-connect hose coupling and clamp-handles. Automatic blower connection converts from intake to blowing without turning off motor. Machines will pick up dust, dirt and liquids, and each unit has a moistureproof, by-pass motor. Made by **Clarke Sanding Machine Co.,** Dept. PB, 30 E. Clay Ave., Muskegon, Mich.

For more details circle NED-445 J7 on enclosed inquiry slip

MANUAL RESET THERMOSTAT
preset range is −10 to 350° F



Now available in this manual reset type having the same dimensions as the automatic version, the series 202 Klixon thermostat is usable in appliances and heating, ventilating and air conditioning equipment. It is offered enclosed in a steel cup for protection against dirt, lint and dust. For fast thermal response, the snap-action bimetal disk can be exposed. Oval, round and four-eared flanges are available for top mounting, and small oval flanges for flush mounting. A water-tight enclosed unit is also offered. Factory preset temperature settings range from −10° to 350° F. Ratings can be specified up to 30 amperes on 120 or 240 v ac, noninductive. Made by **Metals & Controls Corp.,** Spencer Thermostat Div., 1500 Forest St., Attleboro, Mass.

For more details circle NED-446 J7 on enclosed inquiry slip

Electromechanical Breadboard Parts

Helipot Corp.—All parts necessary for the easy assembly of complicated gear trains and servomechanisms are detailed in 24-page catalog 575 on standard electromechanical breadboard parts. Included are typical schematics which are representative of basic synchro transmitter and receiver systems, potentiometer transmitter and receiver systems, and a mechanical resolver system.

For more details circle NED-447 J7 on enclosed inquiry slip

Wolverine TOGGLE CLAMPS

CHECK THESE FEATURES ON YOUR PRESENT TOGGLE CLAMPS

- ✓ Drop Forged Arms for maximum strength
- ✓ Heavy Body section for easier welding
- ✓ Case Hardened Bushings and Pins for better wear
- ✓ Flush Rivoted Pins for more thrust bearing
- ✓ Black Oxide Finish for rust resistance without weld interference

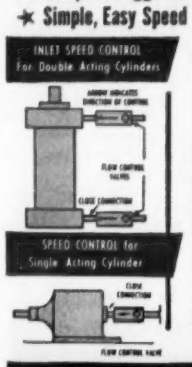
W SINCE 1926

Write for Bulletin
WOLVERINE TOOL CO.
1482 E. WOODBRIDGE • DETROIT 7, MICH.

For more details circle NED-448 J7 on enclosed inquiry slip

Pneu-Trol VALVES

★ Accurate, Constant Cylinder Speed Control
★ Compact Rugged Design
★ Simple, Easy Speed Selection ★ For Air, Oil or Water Applications



Pneu-Trol Speed Control Valves, are widely used in hundreds of control applications because they combine in a short, compact body, a tapered fine thread needle for extremely accurate air or oil flow control and a floating retro ball check, which permits full flow in the opposite direction. Retro ball floats in most sensitive position to its seat, requiring only a slight differential pressure to fully open or close it.

Needle design permits maximum flow capacity in the controlled direction. Metal to metal needle and ball seats insure long trouble-free service. Simple, practical "O" gland structure eliminates troublesome leaking. Valve bodies machined from hex brass or aluminum for 2000 psi working pressures; steel and stainless steel for 5000 psi. Made in 5 female pipe sizes—⅛" to ¾". ATTRACTIVE PRICES . . . IMMEDIATE DELIVERY.

Write for illustrated circular and prices.

Pneu-Trol DEVICES, INC.
1432 N. KEATING AVENUE • CHICAGO 51, ILL.

For more details circle NED-449 J7 on enclosed inquiry slip

New high-vacuum pump creates *vapor-free* vacuum electronically

An electronic pump working without liquids of any kind, the unique new CEC Evapor-Ion pump guarantees a vacuum in the 10^{-4} to 10^{-9} mm Hg range uncontaminated by vapors.

It uses the gettering action of evaporated titanium to evacuate the active gases from a chamber. It ionizes the inert gases and buries them in the walls of the pump.

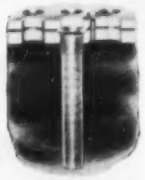
The Evapor-Ion pump shows great potential in electronics, nucleonics, metallurgy, and metallizing.

For information, write to the Rochester Division for Bulletin 6-140

Consolidated Electrodynamics
CEC Rochester Division, Rochester 3, N. Y.
formerly Consolidated Vacuum
SALES AND SERVICE OFFICES IN PRINCIPAL CITIES

For more details circle NED-450 J7 on enclosed inquiry slip

Micro-Inch



Yes — Delpark Filter-Matic

TUBULAR SCREEN VACUUM FILTER

5-1000 G. P. M. Flow Rates

The Filter-Matic gives filtration for super-finish grinding requirements with automatic, permanent element filtration.

Keeps coolant clean, free of contaminants . . . coolant temperature is lowered. Extends grinding wheel life, permits free-cutting action.

Write for more complete information on this newest concept in filtration.

Delpark —First in Filtration Advancement

INDUSTRIAL FILTRATION COMPANY
14 INDUSTRIAL AVE. LEBANON, INDIANA

For more details circle NED-451 J7 on enclosed inquiry slip

SAVE

ON WEBBING

If you use webbing of ANY type we'll wager you can save plenty by making your selection from the hundreds of STANDARD sizes, widths, weights, solid colors or patterns that we can supply from stock. We are America's oldest webbing manufacturer and offer webbings woven from cotton, nylon, dynel, dacron, jute, combed peeler mercerized and high tensile.

We also manufacture a complete line of WOVEN COTTON CONVEYOR BELTS and PURE SHEET RUBBER.

write for samples and prices!

BUFFALO WEAVING and BELTING CO. INC.

210 CHANDLER ST. BUFFALO 7, N. Y.

For more details circle NED-452 J7 on enclosed inquiry slip

TURNING POWER

For threading, cutting, hoisting, cranking, pulling, winching and dozens more!

TOLEDO No. 68 Power Drive will be the busiest — and the handiest — tool you ever owned. It's a rugged, lightweight workhorse, a husky worm and ring gear assembly powered by a ½ HP reversible motor, housed in a gleaming lightweight frame. With adaptors, the No. 68 makes a handy threader for pipe or conduit — handles die stocks up to 4". Die heads change in seconds. The No. 68 is only 6" wide — gets to work in cramped quarters. WHEREVER you need portable turning power the TOLEDO No. 68 is the answer.

Quality Checked

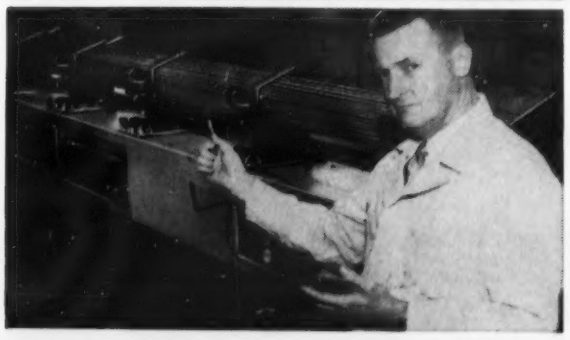
THE TOLEDO PIPE THREADING MACHINE CO. Toledo 4, Ohio

BUILDERS OF THE WORLD'S FINEST PIPE TOOLS

TOLEDO

PIPE THREADERS • PIPE WRENCHES • PIPE MACHINES

For more details circle NED-453 J7 on enclosed inquiry slip



LIPE AUTOMATIC MAGAZINE-LOADING BAR FEEDS GUARANTEE 30% PRODUCTION INCREASE . . .

Find out how much more you can get!

Actual case histories offered by present users of the Lipe AML Bar Feed show production increase of *over* 200%! With figures like these you can visualize what man-hour savings may be produced. Owners realize significant material waste reductions, too.

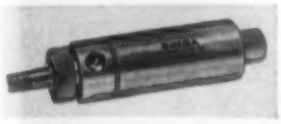
If your production set-up uses automatic screw machines, centerless grinders, turret lathes, punch presses, thread rollers, shears, etc., write or wire for a FREE Lipe Sales Engineering estimate. For folder and complete details contact Dept. BF.

Lipe-ROLLWAY CORPORATION SYRACUSE 1, N. Y.

MACHINE TOOLS • HEAVY-DUTY AUTOMOTIVE CLUTCHES • PORTABLE POWER HACK SAWS

For more details circle NED-454 J7 on enclosed inquiry slip

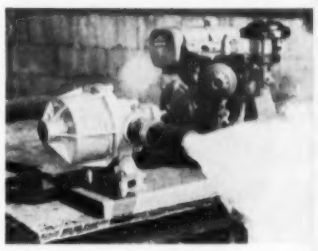
STAINLESS AIR CYLINDERS in 1, 2 and 3-in. strokes



Six models of Bimba throw-away steel air cylinders are available for clamping, pressing, die set stripping, valve pilot control, opening and closing jigs and fixtures, and similar operations. The 1 1/16-in. bore single and double acting cylinders are offered in 1, 2 and 3-in. strokes. All models have vinyl U-cup seals. Inside of stainless body is finished to less than 10 micro-inches. Maximum operating pressure is 150 psi. Made by **Bimba Hardware & Mfg. Co.**, 103 Main St., Monee, Ill.

For more details circle NED-455 J7 on enclosed inquiry slip

POSITIVE DISPLACEMENT PUMP rubber rollers act as rolling vanes



When direct-coupled to a gear-reduced motor or engine, this positive displacement pump with 2-in. ports delivers up to 95 gpm at 700 rpm. Output is not greatly reduced at higher pressures, being about 85 per cent of open discharge flow at 92-ft head. Rubber rollers act as rolling vanes to minimize friction and permit pumping of nonabrasive solids in the liquid. Spring-loaded pressure relief endplate protects pump and connecting pipe or hose lines. Pump is reversible, and is self-priming up to 10-ft above liquid source. Once primed, it has a suction lift exceeding 20 ft. Made by **Hypro Engineering Inc.**, Dept. NED, 700 39th Ave. N.E., Minneapolis 21, Minn.

For more details circle NED-456 J7 on enclosed inquiry slip

LIQUID DENSITY METER for continuously flowing liquids

Easy-to-read indication of liquid density of a continuously flowing process liquid is provided by No. 745 direct-reading meter. It has a zero set adjustment for original calibration and an adjustment for a temperature-corrected specific gravity reading. Instrument handles liquids to 220° F and 125 psi, and is available with ranges from 0.01 to 0.50-specific gravity. It has Pyrex glass pipe, stainless steel or Hastelloy fittings, platinum or tantalum calibrating chain, bimetallic dial thermometer and ½-in. NPT female connections. Made by **Precision Thermometer & Instrument Co.**, Dept. E-2, 1434 Brandywine St., Philadelphia 30, Pa.

For more details circle NED-457 J7 on enclosed inquiry slip

PRE-PRINT CONTAINERS for EXTRA PROFITS

. . . . . use industrial's NEW AUTOPRINTER!

With the new, modern Autoprinter, you date, mark or code multiwall bags and containers as you need them! Completely automatic and electronically controlled, the Autoprinter works right with your production line . . at up to 3,000 impressions per hour!

Investigate how the Autoprinter can speed your operation, save container pre-printing and storage costs, and eliminate costly manual marking expense.

Write for details and catalog today. Dept. NED

ime INDUSTRIAL MARKING EQUIPMENT COMPANY, INC. 454 BALTIC STREET BROOKLYN 17, N.Y. MAin 4-3400

For more details circle NED-458 J7 on enclosed inquiry slip

Here's proof your best buy is EVER-TITE -the best quality quick couplings

Bronze
Aluminum
Stainless
Carbon
Malleable
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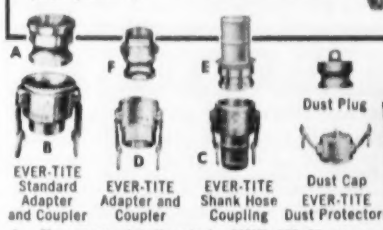
Speedy deliveries—no leaks.

Prolongs life of equipment.

EVER-TITE is the best—ask your distributor now.

EVER-TITE Coupling Co. Inc. 254 W. 54 St. New York 19, N. Y.



Every EVER-TITE saves time and money.

For more details circle NED-459 J7 on enclosed inquiry slip

Units can be purchased in flush-plate or box-type mountings and are adaptable for special panel mountings.

an oil, water, dust-tight CONTROL SWITCH made by machine tool builders to machine tool specifications

THE NAMCO GOLD N RING SEALTIGHT

- Heavy duty silver alloy contact points provide maximum electrical capacity and long life.
- Heavy duty terminal screws have ⅜" thread contact to prevent stripping during installation and permanently secure wires for continuous, trouble-free service.
- Single or double-pole contact block assemblies — can be used interchangeably with several types of GOLD-N-RING push button and selector operator heads.
- Rated for 600 volts — AC or DC. Meets all Joint Industry Committee and National Machine Tool Builder's Association requirements.
- Protected against oil and water seepage in operator head by Sealtight oil-resistant rubber diaphragm.
- Easily replaces existing switches.

For specifications send for Catalog ECS-56

Electrical Manufacturing Division

National Acme

The National Acme Company • 182 E. 131 St., Cleveland 8, Ohio

For more details circle NED-460 J7 on enclosed inquiry slip

Protects Metals Against Hot Acids, Acid and Sulfurous Fumes, Salt Spray, Steam, Mild Alkalies, Up to 600° F.

Markal "D-A" Coatings will protect metal against any corrosive action. It is an ideal product for ore sintering plants, plating plants, food plants, lumber kilns, foundries, chemical plants, sewage disposal plants, laundries, heat exchangers . . . many others.

Markal "D-A" Coatings are applied by brush or spray and can be air dried or baked. The Coatings will withstand temperatures up to 600°F.

For free sample write on company letterhead, stating temperature extremes, surface temperature at time of application, and corrosive condition.

Other Markal Coatings are available in a complete range of types for any condition and temperatures up to 2200°F. Send for catalog No. MPC. The **Markal Company,** 3053 West Carroll Avenue, Chicago 12, Illinois, telephone SAcramento 2-6085 Advt.

For more details circle **NED-461 J7** on enclosed inquiry slip

DON'T LET DARKNESS COST MONEY!

LIGHT UP WITH *Cordomatic*®

DROP LIGHT REELS

20', 30' & 40' cord lengths. Grounding Type Also Available

Ideal for loading platforms, warehouses, construction jobs . . . wherever portable light is needed. Low in cost, mounts easily on wall or ceiling, locks and releases at any desired length. Works like a window shade.

Send for free brochure and dealer price sheet.

CORDOMATIC, Dept. "X"
17th & Indiana Ave., Philadelphia 32, Pa.

Name_____
Firm_____
Address_____
City_____ Zone____ State____
Your Jobber_____

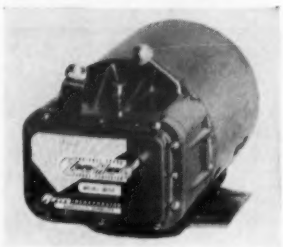
For more details circle **NED-462 J7** on enclosed inquiry slip

SQUEEZE-BOTTLE OILER is made of translucent plastic

Any desired quantity of oil from one drop to a full stream is easily dispensed from this Squee-Zit plastic squeeze-bottle oiler. Made in 4 and 8-oz sizes, it can be stored in any position without leakage. The double-gasketed aluminum protective cap prevents spilling. Oil supply is always visible. Made by **Butler Stamping Co.,** Dept. 68, Butler, Pa.

For more details circle **NED-463 J7** on enclosed inquiry slip

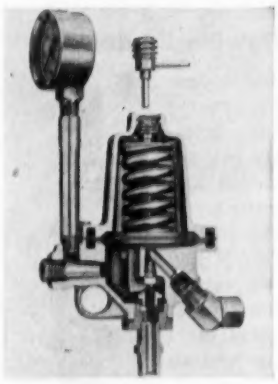
REVERSIBLE DRIVE output variable from 0 to 400 rpm



Instant reversing, while running or stopped, without reversing the motor and with accurate speed repetition is afforded by this Zero-Max motorized variable speed drive. It consists of a Zero-Max reducer attached to a 48-frame 115-v 60-cycle motor through 1:1 helical gears. Output speed can be selected from 0 to 400 rpm, and output is reversed with a lever. Speeds can be set manually or by remote control. Models are available with 10, 15 and 20 lb-in. constant torque output throughout the entire speed range. Prices start at $80. Made by **Revco, Inc.,** Dept. NED, 1900 Lyndale Ave. S., Minneapolis 5, Minn.

For more details circle **NED-464 J7** on enclosed inquiry slip

FLUID PRESSURE REGULATOR controls flow without variation



Smooth, even, regulated fluid flow to spray nozzles and other equipment is assured with this Uni-Flo diaphragm type fluid pressure regulator. Three models are available to control fluid pressures from fraction of a pound up to 160 psi. Mylar diaphragm is impervious to all solvents and separates fluid chamber from control mechanism. Accurate pressure adjustment is made with ball-bearing key. Design eliminates plugging, clogging and material build-up. Made by **Gray Co.,** 1001 Sibley St. N.E., Minneapolis 13, Minn.

For more details circle **NED-465 J7** on enclosed inquiry slip

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CAN HELP YOU!

SEND FOR YOUR FREE COPY OF THIS NEW AND INFORMATIVE BOOKLET.

Clip this handy coupon or write on your letterhead

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Please Send Me a Copy of "The ROL-IT-ON Story"

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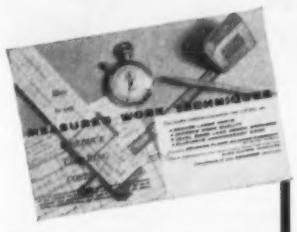
For more details circle **NED-466 J7** on enclosed inquiry slip

FREE HANDBOOK

"how to use
Measured Work Techniques
to reduce cleaning costs"



This booklet contains information that will help you . . .

- **Reduce labor costs**
- **Improve work quality**
- **Even up work load**
- **Eliminate unnecessary work**
- **Check performance against standards**

YOURS FREE... *Write today!*

If you're concerned with rising costs for the cleaning and maintenance of your building, the answer to your problem may lie in the use of measured work techniques—long used in industry but just getting started in building cleaning and maintenance operations.

ADVANCE

ADVANCE FLOOR MACHINE CO.
4102 AC Washington Ave. No.
Minneapolis 12, Minn.

For more details circle **NED-467 J7** on enclosed inquiry slip

in *Socket Head* cap screws, too, *if it's P-K . . . it's O. K.!*

Exclusive size-marking and gear-grip

- Prevents Errors
- Speeds Assemblies

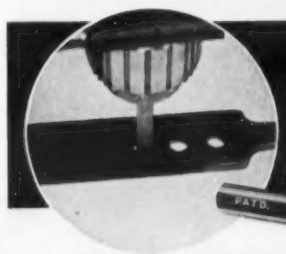
When you order Socket Head Cap Screws, it pays to specify Parker-Kalon. Only P-K's give you labor-saving, money-saving *Size-Mark*—plus *Gear-Grip* that prevents slips by oily fingers and speeds work. For guaranteed quality in all types of socket screws, always order P-K. Write for samples.

IF IT'S P-K IT'S O.K.

PARKER-KALON *Socket Screws*
Parker-Kalon Division • General American Transportation Corporation • Clifton, New Jersey

For more details circle **NED-468 J7** on enclosed inquiry slip

Drill Hardened Steels without Annealing—



USE The New IMPROVED "HARDSTEEL" DRILL

With the new, improved "HARDSTEEL" Drill, you can do accurate, smooth drilling, countersinking, counterboring and reaming in steels hardened by any process without first annealing the work. And they work with equal ease on work-hardening steels and high carbon—high chrome steels of any degree of hardness.

"HARDSTEEL" Drills fit standard drill presses. They save time and reduce rejects. They permit engineering changes requiring additional drilling after hardening. And parts drilled after hardening always match at assembly.

Write for a copy of the "HARDSTEEL" Operators Manual showing how "HARDSTEEL" drills are cutting costs in thousands of plants.

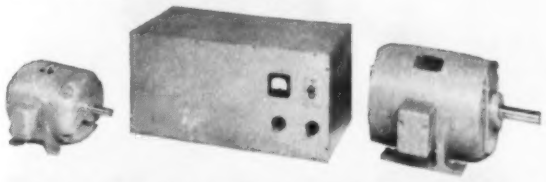
You Harden It—We'll Drill It—With "HARDSTEEL"

BLACK DRILL COMPANY, INC.
1380 East 222nd St. • Cleveland 17, Ohio

"HARDSTEEL"

For more details circle **NED-469 J7** on enclosed inquiry slip

NEW! *For Cellophanes, Polyethylene, Mylar, Vinyls—*



Solve Major Unwind Problems with HOBBS H-G WINDER

Use this new versatile winder with present processing machine or add it to new equipment.

Hobbs H-G Winder lends itself to your present production set up. Provides controlled tension regardless of high or low speed and is absolutely synchronized with the unwinding machine.

Set tension by dial for a wide range of roll changes.

Hobbs Engineers Winding To Your Processing!

Ask For Illustrated Catalog Sheet on The Hobbs H-G Winder

EST. 1883 **HOBBS MANUFACTURING CO.**
16-I Salisbury St., Worcester, Mass.
Branch Offices and Representatives in Irvington, N. J., Chicago, Cleveland, Greenville, S. C. and Toronto, Can.

WINDERS
DIE PRESSES
SHEARS (Hand & Automatic)
SLITTERS
CORNER CUTTERS

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what?

ALL THESE *Snap-on* **SOCKETS TO DRIVE JUST ONE SIZE NUT?**

Yes — and here's why: Every ¾-inch socket shown here solves a particular industrial nut-running problem. Standard length, bolt clearance length, magnetic, Flexockets, power, power-impact and thin-wall types let you choose the socket to do your job faster, efficiently, with less breakage.

Ask your *Snap-on* **man** — Your *Snap-on* man will be happy to help if you have a maintenance or production problem involving special socket design or application. He's a specialist who devotes all his time to industrial application of *Snap-on* tools. Write for a free catalog of industrial sockets, wrenches and hand tools.

*Snap-on is the trademark of Snap-on Tools Corporation.

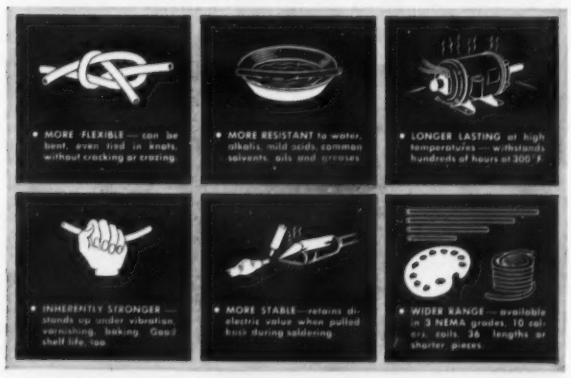
Snap-on Tools FOR ALL INDUSTRY

SNAP-ON TOOLS CORPORATION
8110-I 28th Avenue • Kenosha, Wisconsin

▲ For more details circle NED-471 J7 on enclosed inquiry slip ▲

Where can you use VARFLO?

(the highly flexible Class B Sleeving and Tubing that licks Class A in performance—equals it in price)



Cuts inventory, too! Superior to Class A insulation in performance—yet on a par with it in price—Varflo Sleeving and Tubing can be used economically for all Class A and Class B installations. This low-cost adaptability of Varflo enables many of our customers to achieve substantial savings in inventory. Available in NEMA Grades A-1 and B-1 tubing and Grade C-2 sleeving.

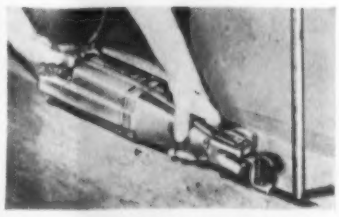
Perhaps Varflo can solve your insulating problems. Describe them in a letter—no cost or obligation for our recommendations.

Varflex CORPORATION
Makers of Electrical Insulating Tubing and Sleeving

Send for FREE Test Samples
510 W. Court St., Rome, N. Y.

▲ For more details circle NED-472 J7 on enclosed inquiry slip ▲

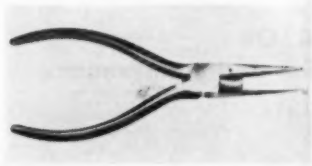
RECIPROCATING SAW will cut flush with any surface



Powered by a ½-hp electric motor, the portable model 250 Super Saw delivers 2500 strokes per minute and is adaptable for all types of heavy or light duty cutting operations. The smooth-operating ball bearing equipped tool can be fitted with a Flush Cut accessory for cutting pipe, bolts, conduit and woodwork flush with any surface. Rocker guide permits gradual entry of the blade into wood or comparable material. Blades are supplied for cutting wood, metal, plastic and other materials in wide range of types and tooth sizes, all color coded for specific service. Distributed by **R.C.S. Tool Corp.**, Dept. N, Box 661, Bloomington, Ill.

▲ For more details circle NED-473 J7 on enclosed inquiry slip ▲

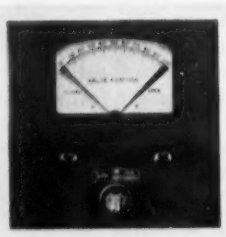
LONG NOSE PLIERS speed cutting, hooking, crimping



Hard or "dead soft" wire is cut cleanly by the 208-6-NC long nose pliers. Shear cutting blade is removable and may be replaced when worn. Reverse side has a milled section behind the knife which holds the cut wire in position to form a hook by turning the hand. Self-opening coil spring and 1/16-in. diameter point are standard. Made by **Mathias Klein & Sons**, 7200 McCormick Rd., Chicago 45, Ill.

▲ For more details circle NED-474 J7 on enclosed inquiry slip ▲

REMOTE CONTROL SYSTEM for use on valves, other mechanisms



Remote positioning of valves, such variable speed mechanisms as throttles and rheostats, and other final control elements is possible with this Cash Standard-Sparton 300 series packaged control system. It can control such functions as pressure, flow, surge, level, proportioning, speed, and other process variables at distances from a few feet to several miles. System combines response speed of electronics with smoothness of pneumatics and hydraulics. Components include a power supply, positioner, reducing valves, and a booster valve. Equipment receives its signals from the remotely located supervisory control unit via telegraph, telephone, or private wires, or by microwave transmission. Made by **A. W. Cash Co.**, Dept. NED, Box 551, Decatur, Ill.

▲ For more details circle NED-475 J7 on enclosed inquiry slip ▲

Use REMA to add years of life to your Belts

***REMA** is the New and Amazing Self-Vulcanizing Rubber Repair Material*

REMA REQUIRES
- NO HEAT
- NO HEAVY EQUIPMENT
- NO CURING TIME DELAY

▼ REMA is not just another cold patch. REMA is vulcanization by chemical process. No heat or heavy vulcanizing equipment required. Here's the astonishing advantage — *when repair work is completed belts may be returned to service immediately.*

▼ REMA seals out moisture, reduces mildew, rot and deterioration — the great enemies of conveyor belts. Your own maintenance man can quickly repair your belts.

▼ Available in introductory kits or parts separately.

Order from your Flexco-Alligator distributor. ***Write for Folder No. R4***

FLEXIBLE STEEL LACING CO., 4664 Lexington Street, Chicago 44, Illinois

REMA SELF-VULCANIZING RUBBER REPAIR MATERIALS

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IT'S POWRARM RIGHT DOWN THE LINE

. . . At Power Products Co., Grafton, Wis.

Wilton PowRarms, placed every two feet on a 100' long conveyor, help Power Products Corporation assemble six gasoline engine models on a single line. PowRarms, which can be moved to any angle in all three planes, and locked in position, enable operators to adjust work pieces to any convenient angle of approach. The result is an exceptionally high rate of production on all models. **PowRarms** come in a wide range of automatic and manual models.

Attach this ad to your letterhead for a free demonstration or literature!

WILTON TOOL MFG. CO., INC.
NED-9 SCHILLER PARK, ILLINOIS

Sold by Leading Distributors The World Over

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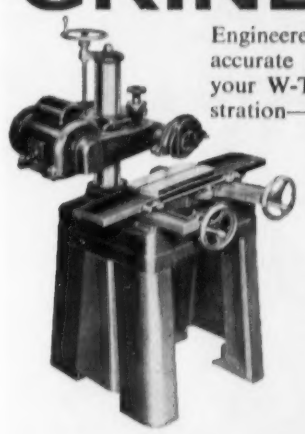
NEW—from WALKER-TURNER

A complete line of "Light-Heavyweight"

GRINDERS

Engineered to give you faster, more accurate grinding *at low cost.* Ask your W-T distributor for a demonstration—mail coupon for details.



NEW WALKER-TURNER SURFACE GRINDER

Use it as a big capacity grinder that offers you the *extra* ability to do chip-breaker and tool and cutter grinding. You get simple set-up, precision accuracy, *AND* surprisingly low cost.

NEW WALKER-TURNER 6" BENCH GRINDER

. . . takes up minimum space for grinding, polishing and buffing. Balanced grinding wheels and precision ground shaft provide smooth, accurate performance.

NEW WALKER-TURNER 6" CARBIDE TOOL GRINDER

. . . keeps your carbide-tipped cutting tools at peak efficiency. Vibration-free operation assures true grinding. Tables tilt for wet or dry grinding at any angle.

NEW WALKER-TURNER 7" TOOL GRINDER

. . . combines positive accuracy with advanced safety features. You get dual shatterproof-glass eye shields, wheel guards, dust chutes, removable steel side plates, and adjustable spark deflectors.

NEW WALKER-TURNER DUST COLLECTOR

. . . has strong, pressed steel cabinet, removable filter, enclosed ⅓ H. P. motor and fan that moves 350 cubic feet of air per minute. Unit is compact and portable.

walker-turner **WALKER-TURNER**
Division of Rockwell Manufacturing Co.,
Dept. WJ-45, 400 N. Lexington Ave., Pittsburgh 8, Pa.

☐ Please send name of my Walker-Turner distributor.
☐ Please send literature on Walker-Turner Grinders.

Name _____
Address _____
City _____ Zone ____ State _____

▲ For more details circle NED-478 J7 on enclosed inquiry slip ▲

NEW NYLON KOOLSHIELD

POSITIVE PROTECTION FROM HOT REFLECTOR When Using 100-Watt Lamp

A marvelous new accessory that snaps over reflector to guard against burning. $1.02 ea. in standard pkg. of 4

Fits all old and new model Localites with half shade reflector

FOSTORIA LOCALITES

Finest Seeing Tools Ever Designed for Machine Tools, Assembly, Inspection

Frictional arm and collar disc joints give flexibility of a thousand positions to direct light exactly as wanted. Rugged construction with heavy duty industrial socket Levolier switch and universal base. Millions in use for fast, accurate, safe seeing.

MODEL 55-BH-701 $8.03 EACH In Std. Pkg. of 4

WRITE for complete catalog of Localite Models for every industrial use.

UL

LOCALITE fostoria for Light ON the Job

THE FOSTORIA PRESSED STEEL CORPORATION, FOSTORIA, OHIO

Localites are available through wholesalers everywhere

For more details circle NED-479 J7 on enclosed inquiry slip

THE Bullard-Burnham SAFETY HOOK

At last a 100% safe hook for every type of hoist and puller. The pushbutton safety gate automatically locks closed, yet opens instantly with a touch of the finger. The safety gate also acts as an indicator to warn operators if the hook is even slightly sprung. Bullard-Burnham hooks are available in sizes #2 - #16A.

With gate open the hook's throat is entirely free.

Write for technical bulletin No. 278.

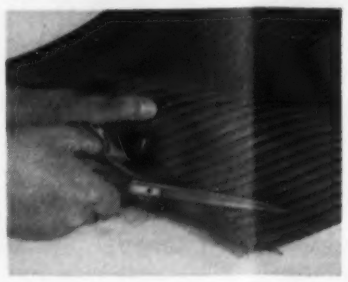
EVERYTHING BULLARD IN SAFETY — see our catalog in PLANT ENGINEERING FILE or write for copy

BULLARD

E. D. BULLARD COMPANY
Sausalito, California

For more details circle NED-480 J7 on enclosed inquiry slip

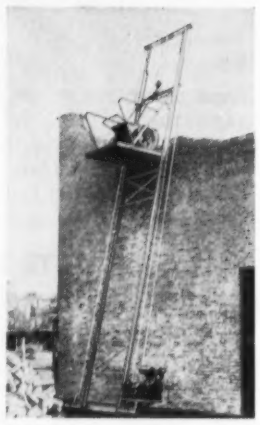
MOUNTING PADS reduce noise, isolate vibration



Mounting pads made from Shear-Flex oil resistant neoprene sheet effectively reduce noise and isolate vibration transmitted from various types of industrial machinery, office and air conditioning equipment. Sheet is 18 in. square by ⅜-in. thick and has a cross-ribbed structure that offers good deflection throughout its 5 to 70 psi load range. Recommended loading is 50 psi, the maximum impact load. Alternately raised ribs provide a skidproof surface. Efficiency increase is obtained by using multiple layers with ribs crossing at right angles. Sheet can be cut with knife or scissors. Made by **Vibration Mountings, Inc.**, 98-17 50th Ave., Corona 68, L. I., N. Y.

For more details circle NED-481 J7 on enclosed inquiry slip

MATERIALS ELEVATOR for construction and maintenance



Loads weighing up to 1200 lb are elevated to heights of 90 ft at speed of 75 fpm on this Liftamatic automatic materials handling elevator. Offered with gasoline engine or electric motor power, aluminum or steel units are made in range of sizes and capacities. Limit stops permit the platform to be stopped automatically at any level. Remote control affords operator control at any position. Slack cable brake will stop a fully loaded platform immediately. Large pneumatic tired wheels give mobility. The power puller units are detachable for use on cranes and hoists. Optional equipment includes a 7-cu ft automatic dumping bucket which bolts to the platform, and extra wheels for towing the steel model. Made by **Sasgen Derrick Co.**, Dept. NDC, 3101 W. Grand Ave., Chicago 22, Ill.

For more details circle NED-482 J7 on enclosed inquiry slip

Lighting Fixture Prices

Swivelier Co.—Condensed catalog and price list gives specs and details on line of adjustable swivel type lighting fixtures for commercial and industrial purposes. Types are available for localized, spot or flood lighting purposes in complete range of decorative and functional designs.

For more details circle NED-483 J7 on enclosed inquiry slip

Severance REGRINDING SERVICE

RECONDITIONING TO *New Tool* PERFORMANCE AT A FRACTION OF *New Tool* COST

HIGH SPEED — *We Regrind* MIDGET MILLS • ROTARY FILES • BURRS • COUNTERSINKS • COUNTERBORES • END MILLS • MILLING CUTTERS • REAMERS — CARBIDE

AMERICAN MAJOR INDUSTRIES FINDS IT PAYS

American Major Industries are now sending their dull cutters to Severance for regrinding because they know (1) strategic material is being conserved (2) quick deliveries are assured (3) their reconditioned tools will give new-tool performance, and (4) their production costs are lowered. This SEVERANCE SERVICE is paying-out for others — it will Pay you too!

At SEVERANCE, New-Tool Craftsmen, using the same precise skill and care that they do in grinding new tools, regrind your cutters. Send in your dull cutters today!

SEND YOUR DULL CUTTERS TO

Severance TOOL INDUSTRIES INC.

761 Iowa Ave., Saginaw, Michigan

Ask for a Severance catalog today!

For more details circle NED-484 J7 on enclosed inquiry slip

Money Saving Ideas!

This brand-new, 32-page illustrated booklet is yours for the asking. Shows many ways to use Denison's versatile 1-ton hydraulic Multipress . . . for performing 101 operations better, faster, at less cost. Use the reader service card, or write:

DENISON HydrOILics

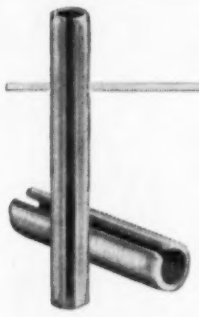
Denison, Denison HydrOILics, and Multipress are registered trademarks of Denison Eng. Div., ABSCO

DENISON ENGINEERING DIVISION

American Brake Shoe Co.

1192 Dublin Road, Columbus 16, Ohio

For more details circle NED-485 J7 on enclosed inquiry slip



cut production costs with SEL-LOK spring pins

SEL-LOK spring pins materially reduce production costs, because you simply drive them in plain drilled holes with either hand or automatic assembly tools. They eliminate expensive close-tolerance tapping, reaming, peening and milling operations, with the associated rejects and waste. Once a SEL-LOK is installed, it stays put—the hollow split tube flexes to absorb vibration and shock. SEL-LOK spring pins are available at your authorized industrial distributor's in sizes ranging from 1/16 by 3/16 to ½ by 5 in., in heat treated alloy or corrosion resistant steel. Write us for Bulletin 2014 and samples. Sel-Lok Spring Pin Division, STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

SEL-LOK® SPRING PIN DIVISION

STANDARD PRESSED STEEL CO. SPS JENKINTOWN PENNSYLVANIA

For more details circle NED-486 J7 on enclosed inquiry slip

DESIGNER APPROVED FOR OVER A DECADE

NEW LOGAN RFL UNIT No. 400

Companion unit to the popular Logan No. 400.

- ✓ Compact, Complete
- ✓ Air Line Filter
- ✓ Pressure Regulator
- ✓ Lubricator

For maximum efficiency insist on Logan RFL Unit . . . the lubricating unit machine tool designers have been using for over a decade.

FREE *Handy Logan CALCULATOR* Mailed promptly on request.

WRITE FOR CATALOG 100—SECTION 4

Logansport Machine Co., Inc.
808 Center Avenue
Logansport, Indiana

For more details circle NED-487 J7 on enclosed inquiry slip

when a feller needs a CAP or a PLUG

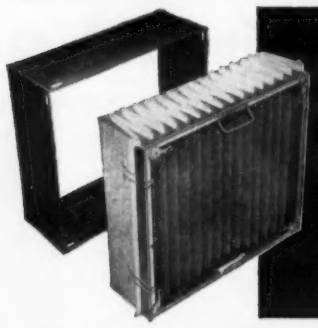
S. S. White

A cap is a cap, and a plug is a plug, and there's no need for the twain ever to meet. You either want one or the other, and whichever you need, count on S. S. WHITE quality Plastic Plugs and Caps to give you maximum protection at the right price. Two lines to choose from! *Rigid Acetate* – our finest – tough, strong, will not shred . . . *Flexible Vinyl* – outstanding in quality, and a lot more economical.

For every need and every budget, S. S. WHITE produces a wide size range of quality Plastic Plugs and Caps – plain or threaded. For samples and full information, just write to: Dept. 7P

THE S. S. WHITE INDUSTRIAL DIVISION
10 East 40th Street, New York 16, New York
Western Office: 1839 West Pico Blvd., Los Angeles 6, Calif.

▲ For more details circle NED-488 J7 on enclosed inquiry slip ▲



AIRMAT PL-24 AIR FILTER

Now in service:
More than 300,000 units!

Highest efficiency plus low initial cost—that's AAF's Airmat PL-24. This renewable-media filter packs 28½ sq. ft. of filtering area in a compact 24" x 24" x 8" unit! The PL-24 requires no oil, no water for washing. A selection of different types of media is available. Media is quickly replaced when dirty, restoring filter immediately to original high efficiency. Unit construction simplifies installation for any capacity requirement. For complete information, write for Bulletin 230.

AAF American Air Filter COMPANY, INC.
391 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

▲ For more details circle NED-489 J7 on enclosed inquiry slip ▲

only 53¢ a day
to run an L-S Model J!

At National Cold Storage Co., Brooklyn, N. Y., . . . a fleet of 12 L-S Model "J" Electrics helps move up to 1 million lbs. of freight daily – *yet costs only 53¢ per truck a day to operate and maintain!**

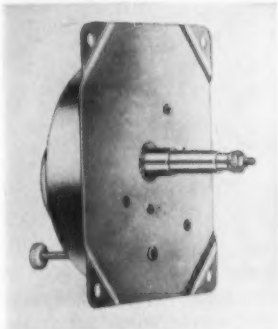
Clean, silent, fumeless . . . the Model "J" is ideal for indoor work. Weighs only 4100 lbs. Easily clears 6' doorways. Lifts 2000 lb., 48" long loads in narrow 7' aisles. Write to:

L-S LEWIS-SHEPARD®
The most complete line of materials handling equipment anywhere
The "MASTER" Line 176 Walnut St., Watertown 72, Mass.

*Average cost for operating and maintenance, including battery charging.

▲ For more details circle NED-490 J7 on enclosed inquiry slip ▲

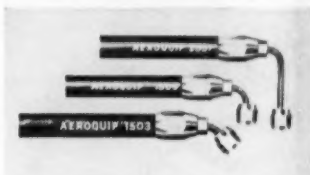
ELECTRIC CLOCK MOVEMENT
powered by synchronous motor



This backset electric clock movement designed for advertising and commercial clock purposes is powered by the silent Ingraham synchronous motor rated 115-230 v, 50-60 cycles. Motor and gear train are completely enclosed and protected. Movement meets standard mounting and size dimensions and is available in various arbor sizes. Center mount can be provided. It has lifetime lubrication and Ingraloy bearing construction. Made by **E. Ingraham Co.**, 392 N. Main St., Bristol, Conn.

▲ For more details circle NED-491 J7 on enclosed inquiry slip ▲

ELBOW HOSE FITTINGS
simplify cramped area installation



Hose installation in confined spaces is simplified and the number of joints and fittings required is reduced through use of elbow hose fittings. They are made from formed tubing with swivel nut ends having JIC and SAE threads. Mating adapters are available for straight gasket seal and pipe threads. All parts are steel. Reusable fittings are offered in 45 and 90-degree configurations in short and extended length elbows for medium and high pressure hose. Made by **Aeroquip Corp.**, 303 S. East Ave., Jackson, Mich.

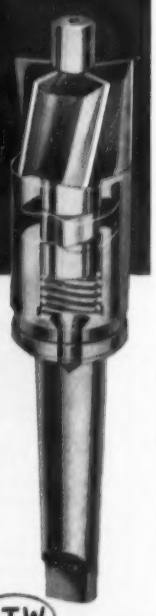
▲ For more details circle NED-492 J7 on enclosed inquiry slip ▲

TRAMP IRON MAGNET
in widths from 6 to 48 in.

Tramp iron is efficiently removed from flowing materials in chutes, spouts, ducts or on conveyors by the Magman plate magnet. Its offset air gap concentrates magnetic force directly over the first pole piece. Tramp iron thus has no chance to speed up and escape past the magnet face. Iron enters the powerful magnetic zone abruptly and is effectively held at the air gap. Magnet is offered in 100, 200 and 300 series, according to strength of pull. Each size is available in 6 to 48-in. widths. Hyflux Alnico V magnets are employed. Made by **Stearns Magnetic Products**, 635 S. 28th St., Milwaukee 46, Wis.

▲ For more details circle NED-493 J7 on enclosed inquiry slip ▲

Why no one reports failure
OF A CONTINENTAL COUNTERBORE DRIVE



Continental Counterbores always deliver satisfaction. Why? One reason is *double integral driving lugs on the shank of the cutter engage double integral abutments in the socket of the holder to provide a balanced, positive drive.* Another reason is drive lugs are close to the seating shoulder of the cutter for maximum torsional rigidity. And one of the best reasons: *just a twist of the wrist engages or releases the cutter!*

FREE CATALOG
Send for illustrated brochure, explaining the many advantages of putting Continental cutting tools to work in your operations. Write Ex-Cell-O, Detroit, or call your Ex-Cell-O Representative.

57-30

CTW Continental TOOL WORKS
Division of EX-CELL-O CORPORATION, DETROIT 32, MICHIGAN

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Save Time and Money on Stainless Semi or Automatic Inert Gas Arc Welding

Arcos Stainless Spooled Wire helps end a host of costly time-consuming welding problems. Its clean, uniform finish gives better conductivity and arc stability. Level-layer-wound reels feed smooth and easy. And Arcos quality—a byword in the industry—leads to improved performance . . . sounder, more uniform welds.

FREE STAINLESS APPLICATION CHART
Send today for this chart on Stainless Welding Rods and Bare Electrodes. Complete data including typical analysis information.

Arcos Corporation, 1500 S. 50th St., Philadelphia 43, Pa.

ARCOS | Filler Metal Specialists

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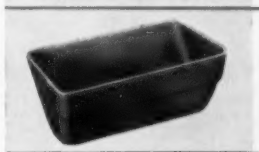
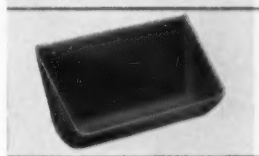
For longer lifting life . . .

STYLE A—These buckets are commonly used on elevators handling coal, grain, cement, chemicals, pulp and similar materials. Available in a range of sizes and capacities.

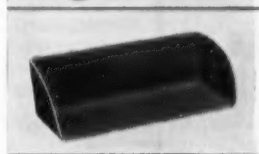


STYLE AA—Designed for longer life on same type of materials as Style A buckets. These buckets are recommended for especially heavy and gritty materials such as sand, gravel and stone.

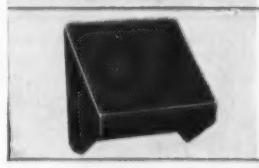
STYLE AA-RB—Elevate same materials as Style AA. These are recommended for extra-heavy service conditions. Buckets feature double-thickness backs, wide digging lip and reinforced ribs.



STYLE B—Widely used for handling coke, ores, stone, and other coarse materials. Buckets offer proper shape and low front to insure clean discharge at relatively slow speed.



STYLE C—Recommended for handling clay, sugar, salt, wet grain, finely pulverized ores, and the like. Open front and low loading angle design prevent materials from sticking or packing in buckets.



CONTINUOUS—Designed for elevating coal, sand, gravel, crushed stone, and other dry materials. Provide high capacities at low speeds. Flanged front forms chute—assures clean, gentle discharge.

match your material and load requirements with the right LINK-BELT cast elevator bucket

Light or heavy . . . free-flowing or sticky . . . abrasive or corrosive . . . fine or lumpy—Link-Belt offers a type and size of cast elevator bucket designed to give you years of trouble-free, low-cost performance. Link-Belt buckets feature reinforced corners for added strength . . . smooth, seamless surfaces for quick, easy pickup and discharge. And they're available in malleable iron or longer-lasting Promal. For facts, see your Link-Belt office or authorized stock-carrying distributor. Ask for Booklet 2465.

LINK-BELT
CAST ELEVATOR BUCKETS

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants, Sales Offices, Stock Carrying Factory Branch Stores and Distributors in All Principal Cities. Export Office, New York 7; Canada, Scarboro (Toronto 15); Australia, Marrickville (Sydney), N.S.W.; South Africa, Springs. Representatives Throughout the World. 14,547

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DUNDICK

C-R-A-S-H-E-S THE PRICE BARRIER on Top-Quality Plug Gages!

DUNDICK DE LUXE Double-End, Reversible-Pin STEEL PLUG GAGES 2" LONG

NOW ONLY $1.25 each in lots of 10 or more. Asst. Sizes.

ALL THE FEATURES OF PRECISION GAGES COSTING MANY TIMES THIS PRICE!

- Oil-hardened Swedish-type Tool Steel
- Actual Precision-Ground Plug Gages — not just Drill or Reamer Blanks
- 720 Different Sizes — .030 to .750 in increments of .001
- Reversible when worn — twice the accurate gaging life

CAN BE PURCHASED INDIVIDUALLY OR IN SETS

GUARANTEED ACCURACY! Tolerances guaranteed plus or minus fifty millionths.

ORDER TODAY—or write for more information

DUNDICK TOOL WORKS, INC.
"The Precision Gage for the Atom Age"
3410 West 31st Street • Chicago 23, Ill.

For more details circle NED-497 J7 on enclosed inquiry slip

For Chain Drive Users

COSTS GOING UP? KEEP 'EM DOWN with cullman STOCK SPROCKETS

Yes sir! With over 1200 sizes to choose from, in all types, and more than 100,000 to draw on—your special sprocket is probably stock at Cullman.

What's more, complete chain drives are available "Off the Shelf" in all pitches, in different speed ratios.

Save time and cut costs on your next chain drive need. Specify stock—Cullman, that is.

Inquiries invited for specials in any type material or quantity. For full particulars write for catalog No. 51, or see your local Cullman distributor.

cullman POWER TRANSMISSION ROLLER CHAINS AND SPROCKETS 25552

REPRESENTATIVES AND DISTRIBUTORS IN ALL PRINCIPAL CITIES

CULLMAN WHEEL COMPANY • 1333 ALTGELD ST. • CHICAGO 14, ILL.

For more details circle NED-498 J7 on enclosed inquiry slip

JELLIFF in Mesh with Industry . . .

Wire Mesh

Specializing in the non-ferrous metals in counts to 200 x 200 or 50 x 750 and widths up to 48" in all commercial weaves

. . . FOR 76 YEARS

address your enquiries to Department 11

THE C.O. JELLIFF MANUFACTURING CORP.
Southport • Connecticut • USA

For more details circle NED-499 J7 on enclosed inquiry slip

SPRING ASSORTMENTS in wide variety of metals

Carefully selected and packaged spring assortments include a wide variety of dimensions, sizes and types for experimental purposes. Collections are based on analysis of commonly needed loadings and dimensions. Springs are made of many materials, including beryllium copper, chrome-silicon, high-nickel alloys, steel music wire, corrosion-resistant wire and others. Assortments are offered by **California Spring Co.**, Dept. NED, 8401 E. Slauson Ave., Los Angeles 22, Calif.

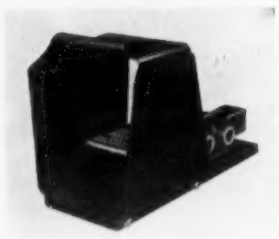
For more details circle NED-500 J7 on enclosed inquiry slip

HYDRAULIC ROD CUTTER actuated by electric power pack

Carbon and alloy steel rods, reinforcing bars and drill rod ranging in diameter to 1⅜ in. are cut quickly with this Porter Hydraulic Cutter. Equipment consists of a lightweight portable cutter head, a hydraulic power pump to supply oil pressure and a high pressure hose. Pistol grip on the cutter head can be adjusted through 360 degrees for cutting in any position. Switch button in the pistol grip controls the cutting action through a safe 12-v circuit. Heads with ¾ and 1⅛-in. capacities are also available. Made by **H. K. Porter, Inc.**, 75 Foley St., Somerville 43, Mass.

For more details circle NED-501 J7 on enclosed inquiry slip

FOOT GUARD protects pedal control valves



This foot guard for Versa pedal-actuated control valves prevents accidental tripping of valve and guards against injury to both operator and actuating device. Steel guard can be used as a portable supporting base for valves that cannot be secured to the floor, or can be bolted down permanently. It can be used with any Versa spring-return or differential pilot-return valve in 2, 3, 4 or 5-way types and in sizes from ⅛ to 1 in. NPT. Made by **Versa Products Co.**, 251 Scholes St., Brooklyn 6, N. Y.

For more details circle NED-502 J7 on enclosed inquiry slip

LOW COST INCINERATOR

BURNS TRASH SAFELY OUTDOORS

Only $110.00 COMPLETE

NO INSTALLATION COST

Burn wrappings, sweepings, papers, cartons, packing, rags, food waste, safely outdoors. Scientific draft control ends fire hazards of flying ash, sparks, burning blowing papers. Burns damp, green, or dry refuse to fine ash in any weather. Minimizes smoke and smell, needs no watching. Safe for use 10' from buildings. Stands 52" high x 35" square at base. 10 bushel burning capacity. Complete with hinged hood, ash pan base and grate and cleanout door. Made of aluminized steel (molten aluminum bonded to steel) with replaceable inner steel panel construction for long life. Shipped assembled—weight 170 lbs. Only $110.00 F.O.B. Cleveland. Satisfaction guaranteed. Other sizes available.

Write for FREE Folder

ALSTO COMPANY
Dept. NE-9 4007 Detroit Ave. Cleveland 13, Ohio

For more details circle NED-503 J7 on enclosed inquiry slip

AUTOMATIC FLOW with Work-O-Matic* box and stand

TEAMING the Work-O-Matic drop-bottom box with Union Metal's specially designed positioning stand means uninterrupted feeding of parts-in-process at proper working level. Result—operator and machine receive a continuing supply of materials . . . no waiting . . . no lost production . . . no stoop, stretch or bend.

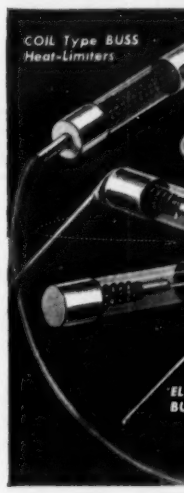
In addition, Union Metal offers industry's broadest line of conventional type material handling containers. Write for complete catalog information. Address The Union Metal Manufacturing Company, Canton 5, Ohio.

UNION METAL
Material Handling Equipment

For more details circle NED-504 J7 on

If overheating can cause t

BUSS Heat-Limiters may answer your problem!



Many types of electrical devices or apparatus can now be protected against excessive overheating creating a hazard or resulting in loss of material.

Properly installed, a BUSS Heat-Limiter will open the circuit if anything causes the temperature at the thermal cut-out of the Heat-Limiter to rise above its opening point. The ability of BUSS Heat-Limiters to do this may be the answer to your overheating problem.

Where used: BUSS Heat-Limiters can be installed in the heater element circuit —or if the heater current is controlled by a contactor they can be installed in the relay circuit.

BUSS Heat-Limiters are available in many types and in many styles of terminals to suit requirement. Tell us your problem and let E neers help you sol

For more inform Bussmann Mfg. McGraw-Edison Co University, St. Lou

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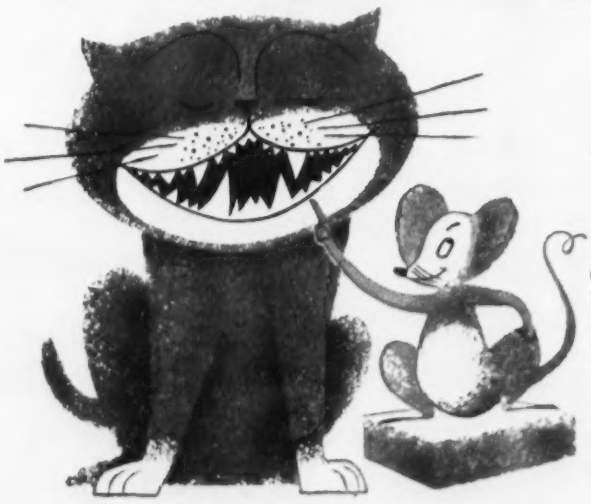

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EVERY TYPE—EVER

SKF®
Ball Bearings
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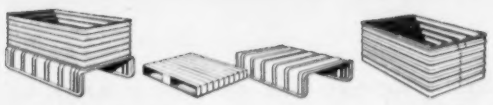
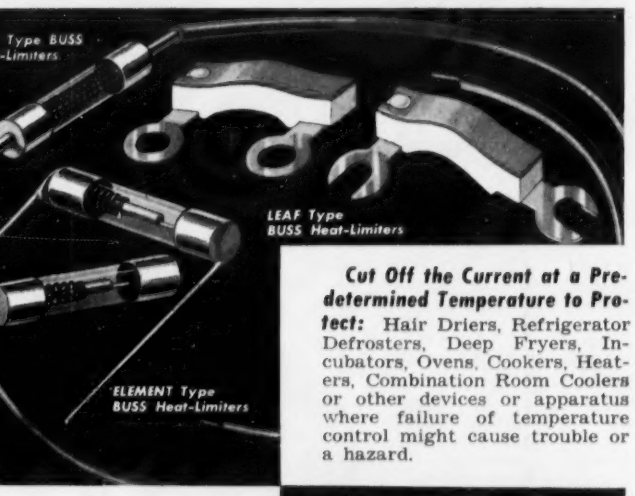


*Patent No. 2,445,038

NED-504 J7 on enclosed inquiry slip ▲

use trouble or danger . .



Cut Off the Current at a Predetermined Temperature to Protect: Hair Driers, Refrigerator Defrosters, Deep Fryers, Incubators, Ovens, Cookers, Heaters, Combination Room Coolers or other devices or apparatus where failure of temperature control might cause trouble or a hazard.

BUSS *Safety-Valve*
HEAT LIMITERS

m and let BUSS engi-
help you solve it.
more information write,
ann Mfg. Division
w-Edison Co., 2632 W.
rsity, St. Louis 7, Mo.

Another outstanding development by the makers of **BUSS FUSES**

NED-505 J7 on enclosed inquiry slip ▲

He's got them all

You'll find the bearings you need
And obtain them with speed
From the place with a complete line
Your distributor with the **SKF**® sign.

Ball and roller bearings of every type
Pillow block housings that fit just right
Other accessories are available too
At the **SKF** distributor who's near you.

7748

TYPE—EVERY USE

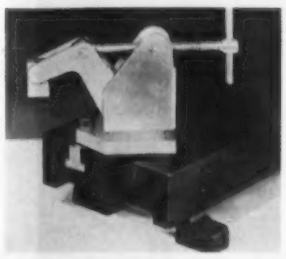
Bearings
trical Roller Bearings
ical Roller Bearings
ed Roller Bearings ("Tyson")

Pat. Off. Tyson Bearing Corporation

PHILADELPHIA 32, PA.

NED-506 J7 on enclosed inquiry slip ▲

WORK-HOLDING CLAMP
for machine tool or fixture use



Workpiece of any shape or thickness up to 3 in. can be clamped and held securely with this No. 3 FCT Lightning Lock clamp. It can be used on jigs or fixtures, or on any machine having a T-slot. Rolled buttress thread and alloy nut applies pressure up to 2000 lb without using wrenches. Instant full retraction is obtained by turning the screw off one turn, lifting handle and pulling back. Made by **General Alliance Corp.**, 2105 Moore St., San Diego 1, Calif.

▲ For more details circle NED-507 J7 on enclosed inquiry slip ▲

ELECTRONIC VOLTMETER
employs transistors, printed wiring

Compact, portable type 10A alternating-current electronic voltmeter is battery-operated unit which features all-transistor design and printed wiring. Instrument can measure voltages from 1 mv to 300 v full-scale, within frequency range of 20 cycles to 500 kc. Large meter swing enables voltage differences as small as 0.5 per cent to be detected. Stable readings can be taken as soon as instrument is turned on. Unit measures 6 x 8 x 6 in. and weighs 5 lb. Made by **Consolidated Electrodynamics Corp.**, Alectra Div., 325 N. Altadena Dr., Pasadena, Calif.

▲ For more details circle NED-508 J7 on enclosed inquiry slip ▲

POWER SWEEPER
sweeps 30-in. swath in narrow aisles

Only 38¾ in. wide overall, model 604 power sweeper can sweep a 30-in. swath. Unit is designed for indoor or outdoor service in narrow aisles or congested areas. Features include large dirt hopper capacity; the Filter-Vac system which eliminates the dust bag; a three-speed forward, one reverse automotive transmission; and automotive type steering. All operating parts are shielded for safety. Made by **Wayne Mfg. Co.**, Dept. ND, 1275 E. Lexington St., Pomona, Calif.

▲ For more details circle NED-509 J7 on enclosed inquiry slip ▲

make hardness tests
ANYWHERE
WITH THE
NEWAGE TESTER

- CLAMPS, JAWS & BASE PLATE ARE ELIMINATED
- NO CONVERSIONS OR CALCULATIONS
- TEST ANY SIZE, SHAPE OR TYPE METAL
- NO SKILL REQUIRED
- SCALE READINGS IN ROCKWELL & BRINELL
- ACCURACY GUARANTEED

Many thousands used by industry and government. Write, wire or call for additional details and prices.

NEWAGE INDUSTRIES, INC.
222 York Road *Jenkintown, Pennsylvania*
TUrner 4-8494 *Dept. N.E.D.*

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Now you specify added safety when you order Stanley Ball Pein Hammers. Exclusive Stanley rim tempering minimizes chipping of critical area . . . assures greater safety for users.

Available with triple wedged "Evertite" selected hickory handles in 10 sizes from 2 to 40 ounces.

Write for new catalog, "Stanley Tools for Industry" to Stanley Tools, Division of The Stanley Works, 589 Elm Street, New Britain, Connecticut.

STANLEY

▲ For more details circle NED-511 J7 on enclosed inquiry slip ▲

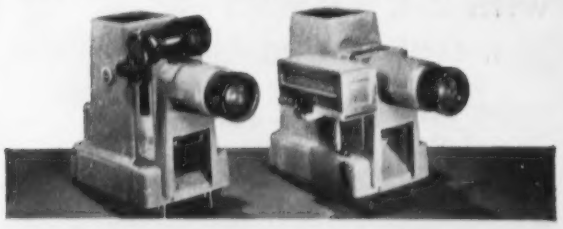
New Bearing Catalog
gives complete specifications for over 1700 stock bronze bearings

This catalog covers the largest range of sizes available in stock bronze bearings. From the many types and sizes available, there is a bearing for almost any application.

If you would like to enjoy the advantages of economy and quick delivery which stock bearings provide, you should investigate the Johnson line described in Catalog 570. For your free copy, write Johnson Bronze Company, 580 S. Mill Street, New Castle, Pa.

▲ For more details circle NED-512 J7 on enclosed inquiry slip ▲

KODASLIDE SIGNET PROJECTORS
have precision movements, handy controls, extra brightness, to help you show your slides and filmstrips with full effectiveness.



Slides and filmstrips work their *hardest* with these easy-to-use, versatile projectors

Make your slides and filmstrips work to full effect—show them with a Kodaslide Signet Projector.

Frames advance smoothly, and fast as a flick—even with cut or damaged film—thanks to the new, enclosed, nylon-geared Geneva mechanism. Sprocket teeth are visible for fast threading. Rapid rewind device.

Convenient controls let you concentrate comfortably on your *presentation*—not your projector. Special lenses and reflectors help deliver brilliant, sparkling pictures. Impeller-type blowers, aluminum panels, thick heat-absorbing glass assure cool, quiet performance. And you can convert from filmstrips to slides—and back—in seconds!

Signets are available in either 300- or 500-watt models, with lightweight carrying cases, if you wish.

Get full details—write for free pamphlet

EASTMAN KODAK COMPANY, Rochester 4, N. Y.

Kodak

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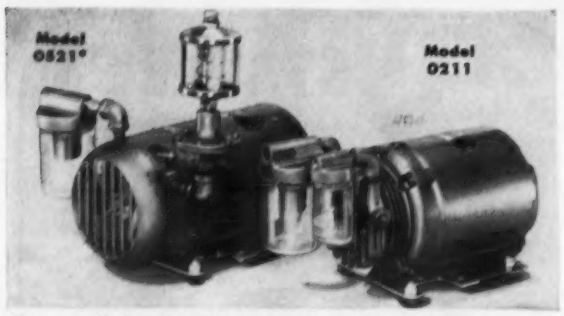


You get 10 big Integral-Motor-Pump advantages in these two NEW types (three models) of

GAST ROTARY AIR PUMPS

Model 0211
1/6 hp, to 1.3 cfm, 25 psi or 27" vac.

Model 0321
1/4 hp, to 2.2 cfm, 25 psi or 28" vac.

Model 0521
1/3 hp, to 3.8 cfm, 20 psi or 28" vac.

*0321 similar in appearance.

1. Latest type G.E. "Form G" motors.
2. More compact than other pumps.
3. Total weight reduced 1/3—cuts shipping costs.
4. Motor mounting time and labor eliminated.
5. Simple, trouble-free rotary-vane design.
6. Vanes take up their own wear automatically.
7. Positive displacement, pulseless air delivery.
8. Improved appearance—smoother exterior.
9. Dependable for original equipment; plant use.
10. Forced air fan cooling on Models 0321 & 0521.

Write for new Bulletins V-356 and P-356! Gast Manufacturing Corp. P.O. Box 117-R Benton Harbor, Michigan.

Original Equipment Manufacturers for Over 25 Years

GAST ROTARY
- AIR MOTORS TO 4 H.P.
- COMPRESSORS TO 30 P.S.I.
- VACUUM PUMPS TO 28 IN.

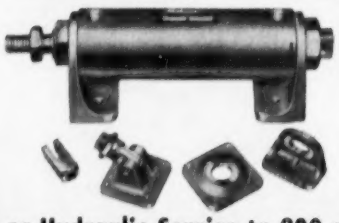
See Our Catalog in Sweet's Product Design File

For more details circle NED-514 J7 on enclosed inquiry slip

Modernair

ECONOMAIR CYLINDERS

Tops in Quality, Economy, Compactness!



For Air or Hydraulic Service to 200 psi

- ★ Compact—feed ring head design eliminates bulky end castings!
- ★ Interchangeable mountings—flange, clevis, L-type
- ★ "O" ring seals throughout
- ★ Available in 1⅛", 1½", 2", 3" and 4" bore sizes, any practical stroke length, cushion or non cushion types

Economair series cylinders offer today's best buy in quality cylinders at truly competitive prices—why pay more and get less? Write today for complete specifications, prices.

Modernair CORPORATION
Dept. F9 400 PREDA ST., SAN LEANDRO, CALIF.
Member National Fluid Power Association 23-R

For more details circle NED-515 J7 on enclosed inquiry slip

Save Time...Labor...Material with BEVERLY metal cutting SHEARS

throatless SHEARS

Make any cut—straight, irregular, curved. Exclusive design permits turning work any direction while cutting. 4 models—cap. to 3/16".

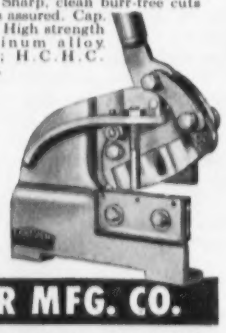
Inside SLOTTER

Makes cuts up to 8" inside edge of sheet. Sharp, clean burr-free cuts always assured. Cap. 16 ga. High strength aluminum alloy body; H.C.H.C. blades.

slitting SHEAR

New "SS" Series—easier cutting with compounded linkage. 3 models—cap. to 5/16"; trimming capacity to ¼" mild.

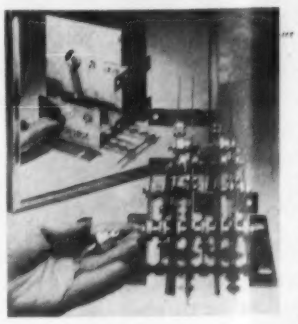
See your Beverly Distributor. Write for FREE illustrated Bulletin.



Beverly SHEAR MFG. CO.
3016 W. 111th STREET • CHICAGO 43, ILLINOIS

For more details circle NED-516 J7 on enclosed inquiry slip

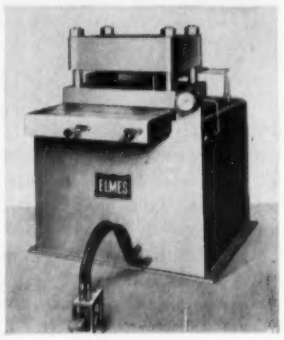
SILICON RECTIFIERS
rated 35 and 22 amp halfwave



Models 302 and 303 hermetically sealed silicon rectifiers provide direct currents up to 35 and 22 amp halfwave, respectively, with maximum peak inverse voltage up to 600 v. Forward voltage drops will not exceed 0.9-v for the 302 and 1.2 v for the 303 at forward current of 10 amp in 25 to 35° C ambients. Reverse leakage is 20 and 10 ma, respectively, at rated peak inverse volts and maximum temperature. Maximum operating junction temperature for both units is 190° C. Plated rectifier case is the positive terminal and has threaded ¼-28 stud for through mounting. Units are also available in complete bridge assemblies. Made by **Westinghouse Electric Corp.**, Box 2099, Pittsburgh 30, Pa.

For more details circle NED-517 J7 on enclosed inquiry slip

HYDRAULIC PRESS
for molding, laminating, compacting



Taking its power from a 80 to 90-psi shop air line, the Elmes Hydrolair hydraulic press is suited for plastics molding, laminating, and compacting. The platen on standard models is the "moving up" type, but it can be of the "moving down" type, such as shown on the special model illustrated. Latter type has manual controls to operate the pressing platen and a foot switch for actuating an unloading mechanism. Press has a 50-ton capacity. Operating equipment is enclosed in the base. Standard models are available in 30, 50, 75, and 100-ton models, with manual control, with or without hot plates. The 50-ton model is also offered with electric pushbutton control. Made by **American Steel Foundries**, Elmes Engineering Div., 1150-S Tennessee Ave., Cincinnati 29, O.

For more details circle NED-518 J7 on enclosed inquiry slip

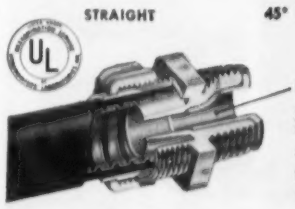
Screw Conveyor for Bulk Materials

Versatile means of handling bulk materials from fine-mesh size up to 2-in. diameter are offered by Flo-tube screw conveyor, described in illustrated bulletin 957. Materials can be moved horizontally, vertically or at any angle of incline, or combination of directions. Application data are included. Request on company letterhead from Canton Stoker Corp., 300 Andrew Place S.W., Canton 1, O.

For more details circle NED-519 J7 on enclosed inquiry slip

NEW...SELF-INSULATED... CONNECTORS
for liquid-tight flexible conduit

STRAIGHT 45° ELBOW 90° ELBOW



INTEGRAL INSULATION eliminates need for separate bushing. Connector far exceeds all UL requirements for continuity of ground, moisture seal and mechanical pullout.

These easy-to-install connectors seal out all moisture, oil, corrosive fluids . . . and provide positive insulation at the same time. Specially designed by T&B to accommodate all standard liquid-tight flexible metal conduit from ⅜" to 4", they require only a single wrench and need not be disassembled. Write for sample, and data on T&B's complete line of liquid-tight connectors.

THE THOMAS & BETTS CO., INC.
24 Butler Street, Elizabeth 1, New Jersey
Thomas & Betts Ltd., Montreal, P.Q., Canada

For more details circle NED-520 J7 on enclosed inquiry slip

Gary WELDED GRATING and TREADS

- TAILOR MADE—for most economical installation.
- RIGID STRENGTH—sturdy resistance-welded construction.
- LIGHT WEIGHT—for greater load bearing capacity.
- SELF-CLEANING—for reduced maintenance costs.
- OPEN CONSTRUCTION—gives maximum ventilation and illumination.

Get all the facts. Write for Bulletin N-97

ROCKWELL SPRING & AXLE CO.
GARY GRATING DIVISION
4017 EAST SEVENTH AVE., GARY, INDIANA

For more details circle NED-521 J7 on enclosed inquiry slip

YOU'LL HAVE IT.....!.... IN MINUTES!

Welcome words to a man who wants a flexible metal hose connector and wants it now, . . . not in days or weeks.

Packless now has, available from inventory, random lengths of seamless flexible, metal hose, in sizes ¼" to 1½" I.D., with appropriate fittings, brazed or mechanical, that you can stock and install *in your own plant.*

Find out more about this new "do-it-yourself" method of licking noise, vibration, expansion or any form of pipe travel by stocking Packless flexible metal hose in all required sizes *before* trouble develops.

For further details send for your copies of Bulletins DC and IND-4.

PACKLESS METAL HOSE INC.
730-39 South Columbus Ave., Mt. Vernon, N.Y.

For more details circle NED-522 J7 on enclosed inquiry slip

For PRESS STAMPING PRODUCTS WITH CURVED OR STRAIGHT LINE MARKING

PRESS STYLE STEEL TYPE HOLDER
MODEL PH-50

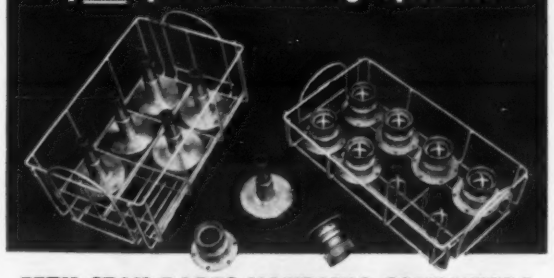
Body and press shank are one piece with flanges to hold type chase in position. Type chase with almost any size or number of characters can be removed and inserted without operator placing hands in press.

Write for Catalog 100

Mecco SAFETY MARKING TOOLS M.E.CUNNINGHAM CO.
1055 CHATEAU STREET, PITTSBURGH 33, PA.

For more details circle NED-523 J7 on enclosed inquiry slip

How to improve QUALITY CONTROL in your parts-handling operations



EEZY-STAK PARTS-HANDLING CONTAINERS SPEED PRODUCTION, PROTECT FINISHES, REDUCE REJECTS, CUT HANDLING COSTS!

Why risk damage to critical-finish, high-cost parts during intra-plant movement? Quality control begins with safe, dependable handling. From initial production through final assembly, you can depend on EEZY-STAK baskets to do a quality parts-handling job. Custom-designed to meet specific requirements, EEZY-STAK baskets protect against damage . . . speed production . . . reduce rejects! Available in a wide range of wire diameters. Sturdy, all-welded construction. Zinc plated to resist rust and corrosion. Patented inter-lock handle for easy stacking. Safe, compact parts storage. (EEZY-STAK baskets also available for bulk parts handling.)

Write today for Bulletin No. B-54

WIRE & IRON PRODUCTS, INC.

1727 SIXTEENTH STREET • DETROIT 16, MICHIGAN

For more details circle NED-524 J7 on enclosed inquiry slip

HEAR every word on the TELEPHONE with a BURGESS-MANNING "Hear-Here" Booth

Now you can hear every word clearly over the phone—even right next to a noisy machine. Burgess-Manning "HEAR-HERE" Booths are acoustically designed to provide an "isle of quiet" in the noisiest place. Ideal for manufacturing areas, hotels, stores, depots, shipping rooms, etc.—a model especially suited to each location.

Different in many ways:

- No Noise—always quiet
- No Doors—always fresh air
- No Corners—to collect dirt
- No Glass—to break

Write for Catalog - Bulletin

PERFORMANCE GUARANTEED

Architectural Products Division of

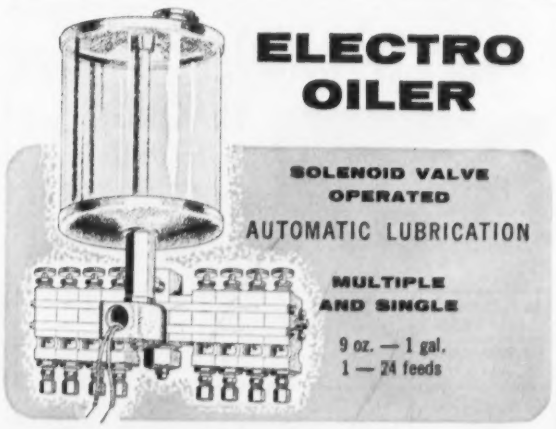
BURGESS-MANNING COMPANY

5968 Northwest Highway, Chicago 31, Illinois

Manufacturers of 3-Way Functional Ceilings and Acousti-Booths for Telephoning

For more details circle NED-525 J7 on enclosed inquiry slip

ELECTRO OILER



Here is the ideal central lubricator for *machine tools, punch presses, paper-textile-laundry-baking machinery, inaccessible bearings, etc.* Oil is fed by gravity to individually adjustable feed outlets. Solenoid is wired across line of driving motor and oiling starts or stops with motor switch. There is only one reservoir to fill, replacing up to 24 individual oil cups.

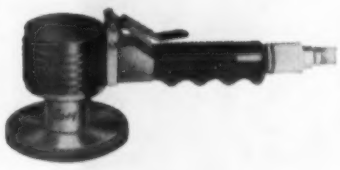
write for catalog!

Oil Cups • Dispensers
Oiling Systems • Valves
Oil Gages • Chain Oilers

Oil-Rite CORPORATION
2364 Waldo Boulevard
Manitowoc, Wisconsin

For more details circle NED-526 J7 on enclosed inquiry slip

DISK SANDER-GRINDERS run at 10,000 to 12,000 rpm



Grinding, sanding, feather-edging, polishing and buffing are typical jobs performed by two light, compact, pneumatic disk sanders. The 3½-lb model DC and the 3-lb model D run at 10,000 to over 12,000 rpm at air pressures of 70 to 90 psi. Former is offered with 4-in. felt sanding pad, a 2-in. molded rubber sanding pad, a speed control air valve and a valve lever booster. Model D, for working inside channels and other close areas, features a side mounted air switch which makes the tool only 3 in. high. It has the same felt and rubber sanding pad and a speed control air valve. Made by **Detroit Surfacing Machine Co.**, Dept. N, 1333 E. Eight Mile Rd., Detroit 20, Mich.

For more details circle NED-527 J7 on enclosed inquiry slip

ALL-NYLON FILTER withstands rust and corrosion

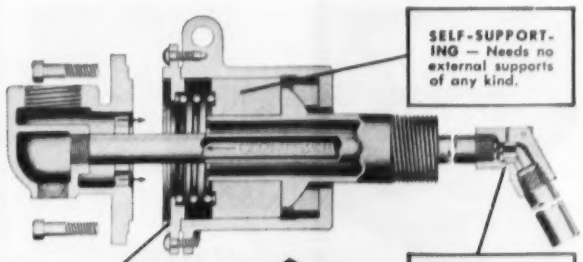
Custom-molded in types, sizes and shapes to meet specific filtering needs, all-nylon filters are composed of one-piece moldings, nylon mesh and supporting structural frame. Parts are injection welded together with a permanent bond. Filters are used effectively with such fluids as oil, water, fuel, air and coolants. Made by **Danielson Mfg. Co.**, Industrial Products Div., Dept. N, Danielson, Conn.

For more details circle NED-528 J7 on enclosed inquiry slip

ROLLER BEARINGS ratings increased by tests

Although Timken tapered roller bearings have not been changed in any manner to increase their load capacity, over 6000 laboratory studies reveal that these bearings can carry much greater loads than their original ratings. Consequently, capacity ratings of most series have been upped from 10 to 39 per cent. This makes it possible to use smaller bearings in many applications with the result that shaft and housing size can be commensurately reduced. Photo shows cross section of typical single roll tapered roller bearing. Made by **Timken Roller Bearing Co.**, Dept. NED, Canton 6, O.

For more details circle NED-529 J7 on enclosed inquiry slip



Johnson Rotary Joint with SYPHON ELBOW

Johnson Joints represent the best way industry has yet found to get steam or liquids into rotating rolls and cylinders. They are completely packless, need no lubrication or adjustment. The Type SBP shown gets steam in, condensate out, through the same head. Other types available for through flow service, in sizes to meet all operating needs. *WRITE FOR COMPLETE INFORMATION.*

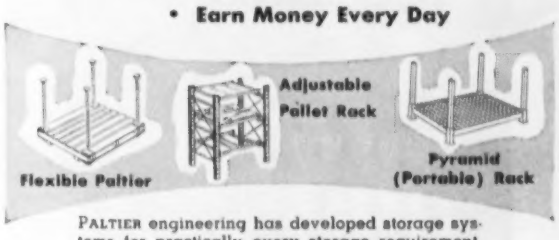
The Johnson Corporation

812 Wood St., Three Rivers, Mich.

For more details circle NED-530 J7 on enclosed inquiry slip

PALTIER SYSTEMS are Best...

- Increase Your Profits
- Provide Maximum Safety
- Earn Money Every Day



PALTIER engineering has developed storage systems for practically every storage requirement, proving that PALTIER's experience has no peer. There is a PALTIER SYSTEM designed especially for your plant.

Let PALTIER Engineers Show You How to Save with Safety.

Write for Complete Descriptive Literature.

THE PALTIER CORP.
Designers, Engineers and Manufacturers of Engineered Storage Systems
1705 Kentucky Street • Michigan City, Indiana
DISTRIBUTORS IN PRINCIPAL CITIES

For more details circle NED-531 J7 on enclosed inquiry slip

How Alcoa Aluminum Fasteners make good awnings even better

Alcoa® Aluminum Fasteners guard your reputation for quality aluminum awnings. They insure against both galvanic and atmospheric corrosion. They provide perfect color match and lasting good looks. Specify Alcoa Fasteners for assembly and installation. Your local Alcoa distributor carries complete stocks for every requirement. He is listed in the Yellow Pages of your telephone directory.

ALCOA ALUMINUM FASTENERS

THE ALCOA HOUR
TELEVISION'S FINEST LIVE DRAMA
ALTERNATE SUNDAY EVENINGS

Your Guide to the Best in Aluminum Value

Fill out coupon for facts, samples

Aluminum Company of America
2245-J Alcoa Bldg., Pittsburgh 19, Pa.

Gentlemen: Please send complete specification data and samples of Alcoa Aluminum Fasteners.

Name _____
Title _____
Company _____
Address _____

For more details circle NED-532 J7 on enclosed inquiry slip

new!
"LARGE SIZE WIRE"
Kleenslot
PREPARATION SCREEN

Wedge-Wire profile F217 - .312x.187
F250 - .375x.191

. . . for dewatering, screening, washing, extracting, filtering or sizing. Designed for extended life in abrasive applications. Easily maintains openings from ½ inch to as close as 1 m.m. Exclusive *Independent Flexing Action* provides greater screening capacities. Adaptable to vibrator applications. Available in many metals. Furnished in guard bars and special shapes or designs. Write for prices and details—send your specifications.

WEDGE-WIRE CORPORATION
Wellington, Ohio

For more details circle NED-533 J7 on enclosed inquiry slip

Quickdraft...
the world's most efficient power exhauster

N-400-QD

...for industry
★ NO MOTORS, FANS OR BEARINGS IN EXHAUST LINE
★ NEEDS NO STACK
★ ACID RESISTING VITREOUS ENAMEL FINISH

Quickdraft improves industrial exhausting and cuts maintenance costs. Its blower operates in clean or outside air . . . eliminating down-time for cleaning and replacing fan blades. Quickdraft excels in venting paint booths . . . lightweight and abrasive waste . . . cellophane cuttings . . . chemical fumes . . . corrosive gases . . . noxious fumes . . . high temperatures . . . moisture and smoke. For heating units, it maintains constant draft required for efficient and economical combustion of all fuels. *Send for engineering data . . . today.*

NOW, all sizes can be furnished with static pressures up to 10-inches . . . and in type-1 Rigid Polyvinyl Chloride for withstanding highly corrosive acids.

Quickdraft COMPANY
P. O. Box 87-L, Dueber-Hampden Bldg., Canton, O.

For more details circle NED-534 J7 on enclosed inquiry slip

HOW MODERN IS YOUR METHOD?
...THIS
... or THIS

• The modern P.D.Q. tooling method completely eliminates the time lost in changing old fashioned type tools. No more "sweating out" loosening and tightening the draw bolt. A 60° turn of the lock nut and you're ready for another tool. P.D.Q. tool changes are only a matter of seconds . . . and tools are available in very small, small, medium and large series depending on the application. Write for literature covering all the advantages of modern, cost cutting P.D.Q. (Portage Double Quick) tooling.

REPRESENTATIVES IN PRINCIPAL CITIES
PORTAGE Double-Quick TOOL CO.
1043 SWEITZER AVENUE • AKRON 11, OHIO

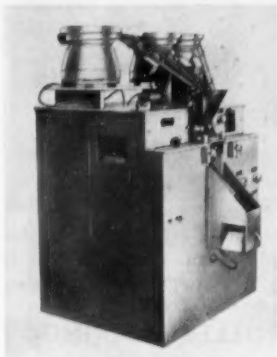
For more details circle NED-535 J7 on enclosed inquiry slip

CONTOUR PROJECTOR
has interchangeable table system

Flat staging table for production line optical gaging and a movable work table for horizontal toolroom measurements are available with the model 14-6 Kodak contour projector. Tables can be purchased separately and are interchangeable. Projector has an 8-in. working distance at all magnifications, optimum screen and surface illumination, good definition and correction for distortion, and simple coordination between chart and fixture. Staging table is 13 x 19⅝ in., and the slotted movable table is 19¼ x 8 in. Latter permits use of standard fixtures for staging wide variety of parts. Made by Eastman Kodak Co. and distributed by **Optical Gaging Products, Inc.,** Forbes & Salina Sts., Rochester 11, N. Y.

For more details circle NED-536 J7 on enclosed inquiry slip

PACKETING MACHINE
seals hardware items in plastic



Capable of packaging up to four different items in a packet formed from a single roll of heat-sealing material, this Formapak machine is fully automatic. It feeds, counts, wraps, seals and codes in a single-station operation, and delivers up to 100 packets per minute, each imprinted with up to three lines of identification. Size of packet is adjustable from 2 x 2½ to 4½ x 5 in. Electric eye accessory is available to control front and back registration when preprinted packeting material is used. It has Air-Jet rejection of non-oriented items and selection of any of four packeting heads, depending upon type and size of items to be handled. Made by **Brown Filling Machine Co.,** 52 Duck Mill Rd., Fitchburg, Mass.

For more details circle NED-537 J7 on enclosed inquiry slip

Valves, Dryers & Strainers

Henry Valve Co.—Valves, dryers, strainers and accessories for refrigeration, air conditioning and industrial applications are described in illustrated catalog 102. Specifications are given. Among products shown are packless valves, pressure sealed dryers, liquid indicators, liquid level gages, packed valves of several types, check valves, flanged unions and refillable dryers.

For more details circle NED-538 J7 on enclosed inquiry slip

The Metron 3 in 1 HAND TACHOMETER...

The most CONVENIENT
most ACCURATE
most READABLE
WAY TO MEASURE SPEEDS OF YOUR MACHINES
3 sliding-scale ranges in 1 instrument!

It's more *readable*—you see only one set of scale numbers at a time. It's more *dependable*—has a simpler operating principle. You switch quickly to any of 3 "sliding scale" ranges. You cannot damage by overspeeding. You get steady readings—electric cable prevents instrument vibration.

For full details write for bulletin 103

Metron INSTRUMENT COMPANY
436 Lincoln St., Denver 3, Colo.
DISTRICT OFFICES • NEW YORK • CHICAGO • CLEVELAND

For more details circle NED-539 J7 on enclosed inquiry slip

for Every Application

SAVE

GIVE YOU GREATER SAVINGS

DARNELL CASTERS & WHEELS

It's in the Book

FREE

write for your copy Now...

get the FACTS!
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3# NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

For more details circle NED-540 J7 on enclosed inquiry slip

this NO-COST TEST OFFER has CONVINCED thousands
. . . send for YOUR FREE "TEST CAN" of C-5 "hi-temp" ANTI-SEIZE THREAD COMPOUND!

For use wherever threaded connections are subjected up to 1800°F. temperatures such as boiler, manhole, face plate studs, cylinder heads, and manifold studs or flange bolts on high temp steam lines and pumps.

Try C-5 and see why manufacturers, refiners and power producers have made it a part of their regular preventative maintenance program.

fel-pro C5 "HIGH-TEMP"
✓ Ends Seizing and Galling even up to 1800°F.
✓ Reduces Wrench Torque
✓ Ends Stud Breakage
✓ Permits Repeated Re-use
✓ Speeds Assembly and Disassembly
✓ Protects Stainless Steel at all Temperatures

1614-B

ANTI-SEIZE THREAD COMPOUND

C-5's exclusive colloidal copper formula separates mating metal threads and surfaces with cushioning, protective copper plating. C-5 prevents galvanic action and eliminates pitting even when dissimilar metals join. On mating metal surfaces, C-5 saves gaskets and countless man hours.

WRITE TODAY For Your FREE Test Sample Can of C-5.

FELT PRODUCTS MFG. CO.
1510 Carroll Ave., Chicago 7, Ill.

For more details circle NED-541 J7 on enclosed inquiry slip

AN ORDERLY SYSTEM
FOR FILING · STORING · SEGREGATING

TRACINGS
BLUE PRINTS
SHEET MATERIAL

FILE CONSTRUCTED IN 200-lbs-Test CORRUGATED CONTAINER

25 TUBE Model 2½" I.D.			2530	2536	2542
49 TUBE Model 1¾" I. D.	49AB	49CD	4939	4936	4942
DEPTH	11¼"	22¼"	30½"	36½"	42¼"
PRICE	$6.25	$8.35	$10.85	$11.95	$12.85
SHIPPING WEIGHT					
MOD. 25	——	——	13 lbs.	15 lbs.	17 lbs.
MOD. 49	8 lbs.	12 lbs.	15 lbs.	18 lbs.	20 lbs.

JR 36
DESIGNED TO MOUNT UNDER BOARD-MOUNTING BRACKETS FURNISHED. GRAY ONLY
SOLD IN SETS ONLY — 2 JR36 PER SET

7.95 SET of TWO

8 lbs. Ship. Wt.

ENAMELED DARK GREEN OR MED. GRAY — State Color

F.O.B. FRASER, MICHIGAN • PRESCOTT 3-2515 • SOLD DIRECT ONLY

ROLL & FILE SYSTEMS, INC. • P.O. BOX 3863, DETROIT 5, MICH.

For more details circle NED-542 J7 on enclosed inquiry slip

ISLAND
LIGHT DUTY SLIDE BED BELT CONVEYOR TABLE

Economical to operate
Easy to install

A LOW COST CONVEYOR that grows with your needs.

Can be added to for any needed length CONSTRUCTED OF STANDARD PARTS

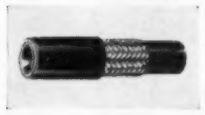
Dept. NED-9 Write for bulletin USB-1.

ISLAND EQUIPMENT CORP.
27-01 Bridge Plaza North, Long Island City 1, N. Y.

For more details circle NED-543 J7 on enclosed inquiry slip

ALEMITE SURGEPRUF
REUSABLE COUPLINGS and HYDRAULIC HOSE

• For Fastest In-The-Field Replacement
• First Choice for Original Equipment



HOSE
Single and double wire type for medium-high pressure and high-pressure service.

COUPLINGS
No skiving! "Double-wedge grip" forces coupling threads through rubber cover, grips either single or double wire braid firmly.

ADAPTERS
Full range of types and sizes — including swivel union adapters.

HOSE ASSEMBLIES
Types and sizes for all hydraulic lines. No special assembly tools required.

Write for a free Surgepruf catalog today!

ALEMITE
Division of STEWART-WARNER CORPORATION
1850 Diversey Parkway, Dept. SS-97
Chicago 14, Illinois

STEWART SW WARNER

For more details circle NED-544 J7 on enclosed inquiry slip

sharp as a tap

with the *Rocket*

TAP SHARPENER

MODEL 50 for 2, 3, 4 flute taps collet capacity to 1-1/16"

MODEL 60 for 4, 5, 6 flute taps collet capacity to 2-1/4"

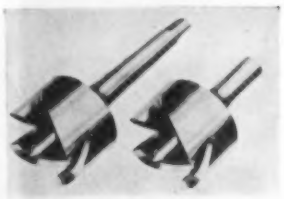
• *low cost*
• *quick*
• *accurate*
• *push button controls*
• *no cams required*

Write for demonstration and literature

ROCKFORD DIE & TOOL WORKS, INC.
1816 Seventeenth Ave. Rockford, Ill.

For more details circle NED-545 J7 on enclosed inquiry slip

HOLE-CUTTING TOOLS
cut large holes in metal and plastic



Concentric, burr - free holes are cut in light-gage metals, plastics, and laminates with Roto-Bor hole-cutting tools. Cutting speed and minimum need for resharpening are assured by four-lip design. Sizes from 1 to 1 9/32 in. have No. 2 Morse taper shanks, while 1 5/16 to 2 1/32-in. sizes have No. 3 Morse taper. All are available also with ½-in. straight shanks. Made by **Jancy Engineering Co.**, 508 S. Pine St., Davenport, Iowa.

For more details circle NED-546 J7 on enclosed inquiry slip

TOOL SETTING GAGE
aligns and parallels work surfaces

Precise setting of cutting tools on machines can be made with this No. 624 planer and shaper gage which incorporates a precision level. Beveled ways eliminate side play and provide accurate alignment and parallelism between working surfaces. With an extension usable on three surfaces, gage has range from ¼ to 10 in. Platform has extra tapped hole to accommodate a post for indicators and other accessories. Forged steel base and slide, and the extension are all hardened and ground. Made by **Brown & Sharpe Mfg. Co.**, Dept. 43, Providence 1, R. I.

For more details circle NED-547 J7 on enclosed inquiry slip

PROPORTIONING PUMP
operates at up to 2500 psi

Teflon - faced diaphragm is used in this packless diaphragm McCannameter pump designed for proportioning and metering fluids. Unit is exceptionally accurate at operating pressures up to 2500 psi. Diaphragm, consisting of solid Teflon bonded to an elastomeric backing, assures long pump life. Other features include capsulated construction, little maintenance, and smooth, continuous flow in a wide output range. Made by **Hills-McCanna Co.**, 2455 W. Nelson St., Chicago 18, Ill.

For more details circle NED-548 J7 on enclosed inquiry slip

Robot-Eye PHOTO ELECTRIC CONTROLS

designed for accuracy and dependability where it COUNTS!

ROBOT-EYE Photo Electric Controls incorporate many of the newest and most advanced features of electronic design and component miniaturization, for greater efficiency and versatility of application.

THESE ROBOT-EYE FEATURES MEAN A HIGHER STANDARD OF OPERATION:
• Light and cell unit — swivel mounted for easy installation.
• Miniature construction permits installation in tight places.
• Cell unit with cadmium sulphide cell has greater life and sensitivity.
• Simple plug-in provision in amplifier for light and cell unit.
• Light source utilizes low voltage bulb, operating below rated voltage for increased bulb life.
• Unit will follow counting operations up to 600 per minute.
• Robot-Eye unit works from either direct beam; reflection from object or mirror reflection.

MODEL RE-3 $65.00
MODEL REC-36 with 6 digit reset counter $88.00

For complete information write to: Dept. NED-P3-9

standard INSTRUMENT CORPORATION
DIVISION OF HEAT-TIMER CORPORATION
657 BROADWAY, NEW YORK 12, N. Y.

VISIT BOOTH 855 AT I.S.A. SHOW!

For more details circle NED-549 J7 on enclosed inquiry slip

NOW MINIATURE ELECTRIC BRAKES AND CLUTCHES

• Above, actual size, is Warner's new electro-magnetically operated SF-100 clutch-coupling designed for low-torque drives of instruments and miniaturized control mechanisms. The flange-mounted field is connected through pigtail leads to a 28- or 90-volt, d-c circuit. There are no slip rings or brushes. Torque is transmitted through the rotor to the armature, which may be keyed to the driving or driven member. Gives you instantaneous, positive engagement and release of loads up to 2 lb. in. (static torque rating). Clutch coupling is ⅞ in. axial length x 1⅛ in. dia. PB-100 electric brakes also available for combination stop-start control. Write for specification sheet "I" 25225.

WARNER

Beat competition with
ELECTRIC BRAKES AND CLUTCHES

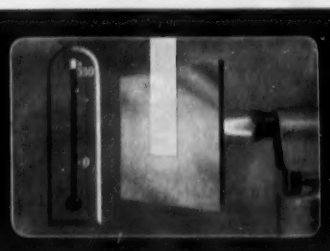
Warner Electric Brake & Clutch Co., Beloit, Wis.

For more details circle NED-550 J7 on enclosed inquiry slip

NEW MYSTIK TAPE with SILICONE ADHESIVE

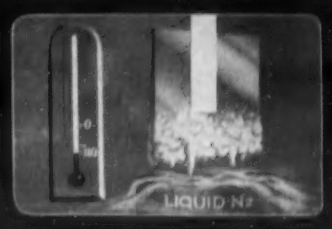
HOLDS FAST in 550° HEAT

Here's visual proof! At 550°F —hot enough to melt most tapes —Mystik 7000G HI-LO Temperature Fiberglas® Tape stays stuck.



Still holds fast at 110° below

Even at 110° below zero, after a bath in liquid nitrogen, this Mystik tape still holds tenaciously.



Mystik Hi-Lo Temperature Fiberglas Cloth-Backed Tape

A silicone adhesive with phenominal resistance to temperature extremes puts this Mystik tape in a class by itself. It is the only completely inorganic pressure-sensitive tape accepted by the aircraft, electrical and electronics industries, and qualifies as Class H insulation. Used for both electrical and non-electrical applications where firm adhesion and resistance to extreme heat and cold are desirable.

MYSTIK INDUSTRIAL TAPES

MT

NED-97 **MYSTIK ADHESIVE PRODUCTS, Inc.**
2635 North Kildare Avenue, Chicago 39, Illinois

Please send sample and full information about Mystik Fiberglas tape that withstands temperatures up to 550° F or as low as —110° F.

Name
Position
Company
Address
City Zone State

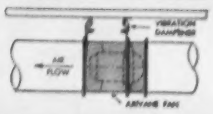
For more details circle NED-551 J7 on enclosed inquiry slip

NEW INDUSTRIAL FANS

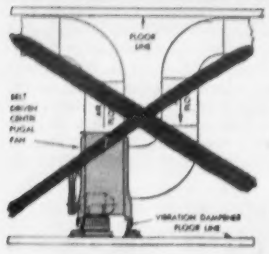
INSTALL FASTER...IN DUCT

COMPARE INSTALLATION The Joy fan needs no foundation, or special ductwork . . . its straight-thru design makes it a part of the duct—and adjustable blades allow for unpredictable pressures . . . installs 3 times faster with far less material and labor costs.

JOY AXIVANE FAN

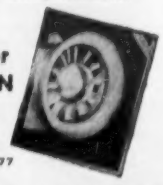


OLD STYLE FANS



SPACE REQUIREMENTS—the Joy fan is up off the floor . . . requires up to ½ less space . . . can be used where other types will not fit. *Joy Manufacturing Company, Oliver Building, Pittsburgh 22, Pa.* In Canada: *Joy Manufacturing Company (Canada) Limited, Galt, Ontario.*

Write for BULLETIN 177-54



WSW I 6659-177

JOY . . . EQUIPMENT FOR ALL INDUSTRY

For more details circle NED-552 J7 on enclosed inquiry slip

CUT ANY REFRACTORY SHAPE
ARCH-SKEW-KEY-WEDGE WITH THE ALL-NEW-

Clipper "SAILS RIGHT THRU"

SUPERMATIC MASONRY SAW

with STA-LEVEL HEAD *and* HI-LO CONTROL WHEEL

NO ADJUSTMENTS TO MAKE

No Need to Turn Off Motor to Raise or Lower Cutting Head. Ready to Cut at Any Height From 0" to 17". . . No Levers or Knobs to Pull. No Gears, No Slides or Unnecessary Parts to Wear Out!

YOU NAME IT THE SAW— THE JOB— THE MATERIAL—

. . . Clipper will name the Best Premium Quality Blade . . . Break - Resistant, Abrasive or Diamond, to give you the Fastest Cut . . . at the Lowest Cost . . . with the Greatest Ease . . . Anytime . . . Anywhere! Mail the coupon or call your Clipper Factory Trained Representative for Same Day Service!

Clipper also builds the famous **"Select-A-Notch"** Masonry Saw—the Saw that one man can adjust from his cutting position, priced from **$335**

ORDER YOUR CLIPPER MASONRY SAW ON FREE TRIAL!

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Genuine Clipper Products Sold Direct—Immediate Shipment From Factory Branches Coast To Coast

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25 E. 28TH ST. • KANSAS CITY 8, MO. 236X

- ☐ Ship a SUPERMATIC Masonry Saw on FREE TRIAL
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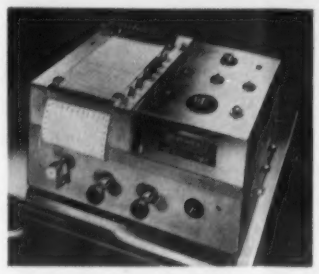
- ☐ Send my Clipper Factory Trained Representative to see me

NAME _____
ADDRESS _____
CITY, STATE _____

For more details circle NED-553 J7 on enclosed inquiry slip

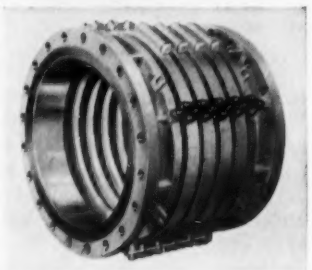
GAS & VAPOR ANALYZER
desk model for lab or field use



Simple, rapid analysis of a large group of gases and vaporizable mixtures can be made with this desk model 9490 vapor phase Chromagraphette. Requiring only 150 w at 115 v, 60 cycles, apparatus can analyze gases or mixtures for components boiling up to 125° C. Maximum operating temperature is 100° C. It is applicable to analysis of hydrocarbons from methane through nonane and other components having similar boiling point range. Features are a 10 mv recording potentiometer (optional), an interchangeable sampling system for either liquids or gases and a thermistor-type detector. Instrument accommodates columns up to about 30 ft long. Made by **Podbielniak, Inc.**, Dept. NED, 341 E. Ohio St., Chicago 11, Ill.

For more details circle NED-554 J7 on enclosed inquiry slip

CORRUGATED EXPANSION JOINTS
in 3 to 72-in. diameters



Movement of power and process piping systems is shared equally by all corrugations in line of improved Duo Equalizing expansion joints. Made from stainless steel, these units are used in all - weather outdoor piping systems and for indoor systems operating on frequent on-and-off cycles. Distribution of pipe movement is accomplished by pantographs. Pantograph neutrals are anchored to unit's end fittings and intermediate equalizing rings. Units feature 30 per cent less overall length, 30 per cent less weight and greater stability at high pressures. Joints are made in 3 to 72-in. diameters for traverses up to 7½ in. in single, or 15 in. in double units. Standard units are designed for 150 and 300 psi working pressures. Copper units are available in 3 to 24 in. diameters. Made by **Zallea Brothers**, 818 Locust St., Wilmington 99, Del.

For more details circle NED-555 J7 on enclosed inquiry slip

Heating Element Alloy

Hoskins Mfg. Co.—Chromel-D, a 35-20 nickel-chromium-iron heating element alloy for use in controlled atmosphere furnaces operating up to 1800° F, is subject of 12-page illustrated catalog-manual M-55D. Prices and specifications of the alloy, supplied in wire, ribbon and furnace strip form, are included, along with technical data and design factors.

For more details circle NED-556 J7 on enclosed inquiry slip

Saves floor space!

Multiple Dipping with LANDAHL CONVEYOR

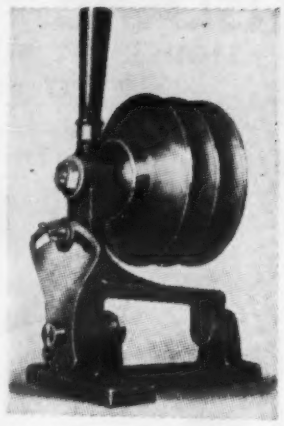
Sharp dips and turns are features of this installation. The Landahl Chainless conveyor furnishes both horizontal and vertical turns on a minimum radius of 24 inches. The conveyor carries metal products through a cleaning operation consisting of a series of dip tanks only 6 feet long. It then continues through drying oven to take-off point.

Write today for bulletin LS-1.

The LANDAHL CONVEYOR CO., 13116 Athens Ave., CLEVELAND 7, OHIO
A SUBSIDIARY OF THE AMERICAN MONORAIL COMPANY

For more details circle NED-557 J7 on enclosed inquiry slip

VARIABLE SPEED CONTROL



Variable speed control of V-belt and equipment up to a maximum 3 to 1 ratio is provided by this single lever controlled unit. Mechanically simple in design and sturdily constructed to withstand hardest service, models 1A and 2A Toledo variable speed controls have numerous unique features including: plain, smooth pulley, eliminating noise and vibration; stepless speed variation up to full 3 to 1 ratio; minimum pulley diameters are increased to transmit greater H.P. over entire range; new pulley design providing cylindrical bottom for V-belts which fixes minimum pitch diameter, preventing damage to belts and giving increased torque; single arm support, for easy belt application; large shaft, oilite bearings and lubricant reservoir; sector plate serving as dial indicator and additional locking medium; unusually attractive prices.

Wheel assemblies can also be purchased without mountings for application on machines providing built-in speed control.

If you have a variable speed control problem, either on plant equipment or on machinery you build for sale, investigate the Toledo variable speed control . . . you'll be interested in its efficiency and low price. Ratios as high as 10 to 1 are available. **The Toledo Timer Co.**, 2224 Albion St., Toledo, O. **Adv.**

For more details circle NED-558 J7 on enclosed inquiry slip

Modern AIR CONVEYING for BULK MATERIALS HANDLING

SPROUT-WALDRON

PNEU-VAC

Modernize for greater savings with a Sprout-Waldron PNEU-VAC Pneumatic Materials Handling System. It draws granular, pulverized, and flaky materials by air anywhere you can run a pipe. The unit can be made to cool, to heat, to aerate, to dry.

Pneu-Vac is self-cleaning, does not produce dust, prevents infestation and product intercontamination, saves space, increases production, provides greater safety and better working conditions.

Sprout-Waldron also offers complete lines of the most advanced screw, belt, and drag conveyors . . . bucket elevators . . . and rotary vane feeders. Write for details.

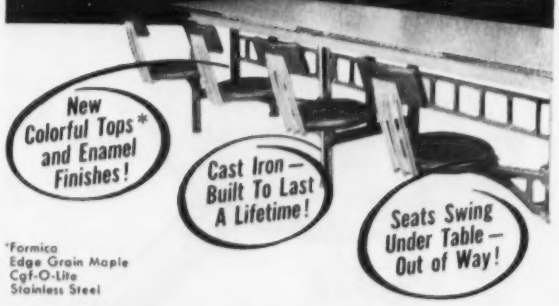
Write for Bulletin 18-D.

IN/495

SPROUT-WALDRON
Manufacturing Engineers Since 1866
8 LOGAN STREET • MUNCY, PA.
EQUIPMENT FOR SIZE REDUCTION • MIXING & BLENDING • BULK MATERIALS HANDLING • PELLETING & CUBING • PRODUCT CLASSIFICATION

For more details circle NED-559 J7 on enclosed inquiry slip

INDUSTRIAL AND INSTITUTIONAL
SECTIONAL TABLES
with SWING SEATS



*Formica
Edge Grain Maple
Cgf-O-Lite
Stainless Steel

MAXIMUM SEATING CAPACITY IN LIMITED SPACE!

Colorful tops and wide range of enamel paint finishes add attractive new color to industrial and institutional dining rooms and recreation rooms. Units seat 4 to 24 people. Attached seats (with or without backs) swing under table to eliminate crowding, noise and confusion of loose chairs and tables. Ideal for industry, schools, hospitals and institutions.

WRITE TODAY For NEW Catalog!

DISTRIBUTORS IN ALL PRINCIPAL CITIES
The Chicago Hardware Foundry Co.
"Dependable Since 1897"
1997 Commonwealth Ave.
North Chicago, Ill.

For more details circle NED-560 J7 on enclosed inquiry slip

Remove Broken Taps WITHOUT WASTING Costly Production Time

That unexpected, stubbornly-held broken tap can cause exasperating delays in production, add unnecessary cost to the job, and shrink profits.

WALTON TAP EXTRACTORS
REMOVE BROKEN TAPS
QUICKLY • EASILY • INEXPENSIVELY

2, 3, 4, 5, 6, Flute Styles. In Sizes No. 4 to 1½"

The majority of broken taps can easily be removed with Walton's simple, specialized hand tools. No expensive machines needed. Will not damage threads or work.

Take advantage of Walton's **30-day free trial offer** to prove in your shop that the high labor cost of tap breakage can be reduced. Write for Data Folder No. 26 giving complete details.

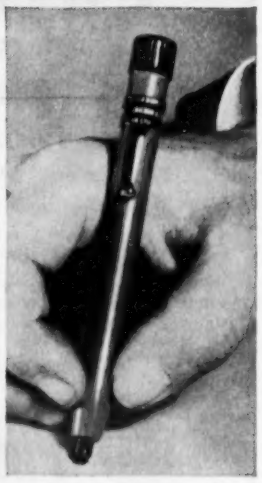
The WALTON Company
HARTFORD 10, CONN.

▲ For more details circle NED-561 J7 on enclosed inquiry slip ▲

TWEETEN Marker
THE PENCIL OF 1000 USES

DEPENDABLE DURABLE

Marks on any surface
Wet • Dry • Frozen
Soft • Hard • Rough



Heavy duty marking pencil with screw type feed. Neat and clean—always ready for instant use.

Extra long 3½" refills available in black, yellow, red, blue, green and white.

The choice of Industry.
Order from your Supplier

TweeTen Fibre Company
2029 W. Fulton St. Chicago 11, Ill.

▲ For more details circle NED-562 J7 on enclosed inquiry slip ▲

New Parker Power Tube Flarer for fast, easy production flaring

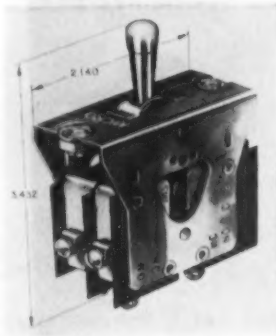
- Electric-motor driven machine produces perfect, concentric, smooth-surfaced flares even with *stainless steel* tubing. Also handles copper, aluminum, and steel. For all sizes from ⅛" through 2", OD.
- Standard (AN, JIC, SAE Hydraulic) 37 degree flares for use with Triple-lok (or AN) tube fittings.
- Readily-interchangeable heads and accessory attachments for squaring-burring and beading of tubing.
- Available with air-operated tube clamp on special order.
- Full details, Parker Catalog No. 1145A12.

Parker
Hydraulic and fluid system components

Order from your Parker Distributor — or Tube and Hose Fittings Division, Section 426-Q, The Parker Appliance Co., 17325 Euclid Ave., Cleveland 12, Ohio

▲ For more details circle NED-563 J7 on enclosed inquiry slip ▲

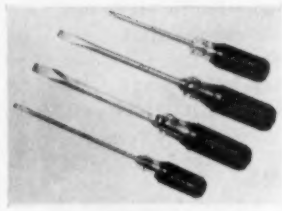
SAFETY TOGGLE SWITCH is UL-listed for 10 amp, 250 v ac



Safety catches in this series of three-position toggle switches guard against accidental toggle movement. Lever is "held" in set position until released by a pull of about 1/10-in. for movement. Model 111AT has two basic switching units in each assembly, while the model 115AT has four switching units. All are single-pole double-throw. Switches are UL-listed and are rated 10 amp, 125 or 250 v ac. Made by **Minneapolis-Honeywell Regulator Co.,** Micro Switch Div., 205 S. Chicago Ave., Freeport, Ill.

▲ For more details circle NED-564 J7 on enclosed inquiry slip ▲

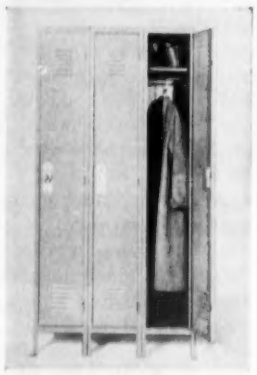
SCREWDRIVERS have neoprene cushion grip



A neoprene rubber grip permanently bonded to an amberlite handle is featured by line of screwdrivers. The resilient Cushion Grip is unaffected by water, oil and gasoline, and never hurts the hand, no matter how hard it is gripped. Handle does not slip in the hand even when wet or oily. Tool has alloy tool steel blade and solid, bolstered winged shank for strength. Sixteen sizes range from 3 to 12 in. with list prices from $1.00 to $2.70. Made by **Bridgeport Hardware Mfg. Corp.,** Dept. C, Bridgeport, Conn.

▲ For more details circle NED-565 J7 on enclosed inquiry slip ▲

STORAGE LOCKER door has flush handle, louvers



Three-way latch action incorporated in line of flush-front storage lockers has a retractable padlock loop and prelocking feature, permitting the door to be locked while open and lock automatically when closed. Latch receives a built-in master-keyed flat key or combination dial lock. Door has recessed handle and ventilating louvers. Lockers are available in standard sizes, with flat or slope top, and choice of 6-in. legs, closed base or no legs. Colors are available. Made by **Aurora Steel Products Co.,** 274 Third St., Aurora, Ill.

▲ For more details circle NED-566 J7 on enclosed inquiry slip ▲

Now! feed parts automatically with Feedall

ELEVATING FEEDERS — For fully automatic feed and orientation of rolling or sliding parts.

HOPPER FEEDERS — For high production with minimum handling.

BAR FEEDERS — For continuous feed 5 to 20 fpm. Completely self-contained units with variable speed.

TO CUT COSTS: ADD COMPLETE AUTOMATIC FEED ON FAST PRODUCTION MACHINES

Feedall Automatics have now been used with exceptional results to feed gear blanks, valve plugs, steel or plastic bushings, bars up to 1-1/2" x 30' long, and scores of widely varied parts. These time and cost-saving machines add storage capacity, save manpower, boost production, cut unit costs. And engineering design is outstanding.

NEW CATALOG contains all data, includes estimate sheet. Write for your copy today.

Feedall *Producers of automatic feeding devices*
FEEDALL, INC. • WILLOUGHBY, OHIO

▲ For more details circle NED-567 J7 on enclosed inquiry slip ▲

What shape is a quality fastener?

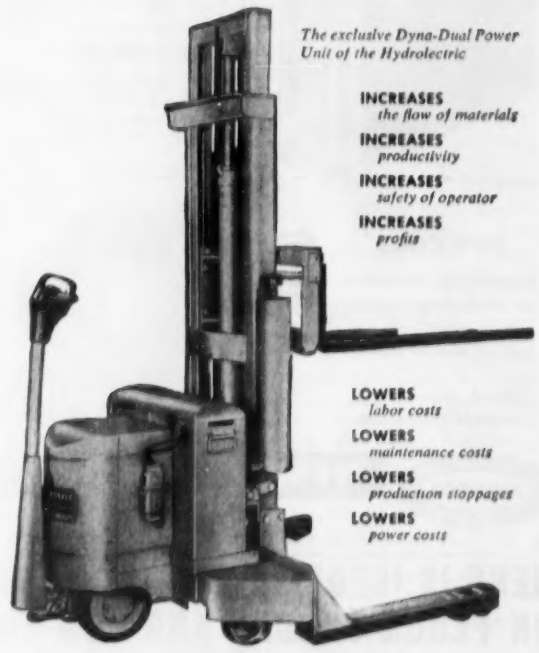
Here is a handful of ELASTIC STOP® nuts. Each has ESNA's familiar red locking collar*. . . is vibration-proof and made of the finest materials. Each is exactly controlled as to finished dimensions, class of thread fit and finish . . . with an unmatched record for uniformly high quality. **Most of them are standard parts** . . . some originated as a result of a specific request for ESNA's assistance. So . . . for help on *your* next fastening problem, send us the details of your application. Write Dept. S1-953

*The red locking collar is a Registered Trade Mark of ESNA.

ELASTIC STOP NUT CORPORATION OF AMERICA
2330 Vauxhall Road, Union, New Jersey

▲ For more details circle NED-568 J7 on enclosed inquiry slip ▲

MODERNIZE WITH
America's most Modern Truck
HydroLectric
A GREAT NAME IN LIFT TRUCKS



The exclusive Dyna-Dual Power Unit of the Hydrolectric

INCREASES *the flow of materials*
INCREASES *productivity*
INCREASES *safety of operator*
INCREASES *profits*

LOWERS *labor costs*
LOWERS *maintenance costs*
LOWERS *production stoppages*
LOWERS *power costs*

PUT THESE MODERN FEATURES TO WORK GREATER PROFITS AT NO ADDITIONAL COST

- Two driving wheels instead of one
- Braking with handle in any position
- Automatic parking brake (optional)
- Sealed alloy gears instead of chains
- Sealed ball-bearing rollers in masts
- 100% more steering ease with two wheel drive
- Power unit removal complete in 20 minutes
- Greater tire capacity equivalent load ratings

The only truck with 2 driving wheels and 2 braking systems. In fact Hydrolectric does everything a good lift truck should do.

STUEBING Designed • Engineered • Built

LIFT TRUCKS, INC., / CINCINNATI 14, OHIO

THERE IS A TRUCK FOR EVERY PURPOSE TO HANDLE ANY KIND OF MATERIAL.

▲ For more details circle NED-569 J7 on enclosed inquiry slip ▲

STICHT TACHOMETERS

FOR EVERY NEED . . . EVERY SPEED

CENTRIFUGAL HAND TACHOMETERS

Universal Type UO with 5 ranges in one instrument. With overspeed protection.

CAT. NO. 303, 30-12,000 RPM
CAT. NO. 314, 45-18,000 RPM
CAT. NO. 322, 60-24,000 RPM
CAT. NO. 346, 120-48,000 RPM

Many other models with one, three or five ranges. BULLETIN 750

CHRONOMETRIC HAND TACHOMETERS

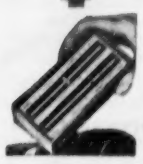
"Jaquet" Speed Indicators with built-in chronometer movement. Timing period 3 or 6 seconds. Guaranteed accuracy 1/2 of 1 per cent. Various accessories.

CAT. NO. 2301, 0-10,000 RPM
CAT. NO. 2302, 0-1,000 RPM
CAT. NO. 2304, 0-100 RPM

Suitable double rated speed. BULLETIN 735

CENTRIFUGAL STATIONARY TACHOMETERS

For permanent mounting on machines. Model J. Sizes 3 in., 4 in., 5½ in., 8 in. and 10 in. dial diameters. Flexible cable driven. Many standard ranges reading RPM, FPM, YPM, etc. BULLETINS 794, 795, 796



VIBRATING REED TACHOMETERS

PORTABLE AND STATIONARY

Measure speed by touch. Many different ranges from 900-100,000 RPM.

WRITE FOR BULLETIN 770-A

HERMAN H. STICHT CO., INC.
27 PARK PLACE, NEW YORK 7, N.Y.

For more details circle NED-570 J7 on enclosed inquiry slip

TOOLMAKER'S PROJECTOR in 10 to 100-X magnifications, examines both contour and surface

Small tools and formed, stamped, or machined parts can be examined for both contour and surface details with the Toolmaker's Projector. Instrument employs both substage and surface illumination and has a 6-in. square, opaque white, photometric screen. Parallax-free images projected onto screen are shielded from extraneous light and reflections. Screens are interchangeable, allowing a library of specifically charted screens to be maintained.

Tolerance lines are sharply defined lines of light for easy, accurate reading. Standard magnifications of 10, 20, 31.25, 50, 62.5, and 100 X are available, as well as special magnifications and working distances. Measuring capacity is up to 6 in. in one setting. A 1 x 2-in. and a 1 x 6-in. coordinate stage are provided, the latter with helix adjustment and 5 in. of gage blocks. Micrometers with 0.0005-in. and 0.0001-in. increments apply to either stage. Made by **Stocker & Yale, Inc.**, 77 Green St., Marblehead, Mass.

For more details circle NED-573 J7 on enclosed inquiry slip

POR-ROK (POUR ROCK)

Fast Setting Cement

PERMANENTLY ANCHORS BOLTS IN CONCRETE WITHIN 30 MINUTES!

Securely fastening machinery, hand rails, seats, fixtures or any type of equipment to concrete by means of anchor bolts can now be done quickly, easily and safely with Por-Rok Quick Setting Cement.

Por-Rok successfully replaces lead and sulphur, and costs considerably less. Applied cold, there is no heating hazard. Simply mix Por-Rok powder with water and pour around bolt. Within 30 minutes the cement sets hard and the bolt is anchored permanently.

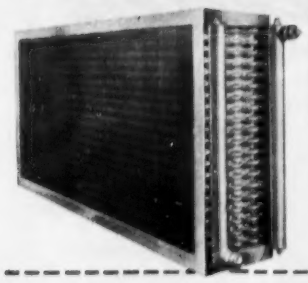
Por-Rok also makes quick, lasting repairs to holes and breaks in concrete floors with little or no interruption to normal traffic. It is self-bonding, self-leveling, oil-resistant, does not shrink. Compression strength of 4500 lbs. p.s.i. in one hour GUARANTEED.

For complete information—without obligation—write

THE HALLEMITE MFG. CO.
2452 WEST 25th ST. • CLEVELAND 13, OHIO

For more details circle NED-576 J7 on enclosed inquiry slip

. . . BUILT FOR *Outstanding Performance*



REMPE COILS

Designed to rigid specifications to insure long, trouble-free life.

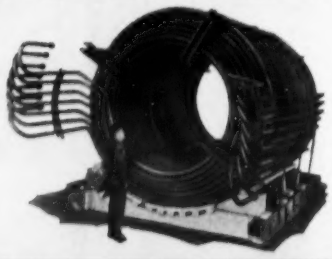
FIN TYPE COILS

For Air Conditioning, Refrigeration and Heating — available in copper or steel hot galvanized — any size, any style.

PIPE COILS

Complicated assemblies or production runs of coils or bends from any type of pipe or tubing.

Send details for prompt quotation

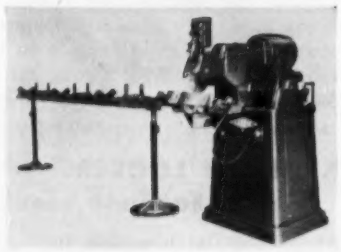


HEAT TRANSFER EQUIPMENT REMPE CO. Founded 1890

REMPE COMPANY
338 N. Sacramento Blvd.
Chicago 12, Illinois

For more details circle NED-571 J7 on enclosed inquiry slip

ROLLER PIPE CUTTERS powered by 5-hp 1800-rpm motor, have 1/8 to 3-in. pipe capacity



Designed to replace former No. 2 style cutters, series 2B pipe and nipple cutters feature an increased capacity of 1/8 to 3 in. Both the illustrated 2BA air-operated and 2B manually operated cutters are powered by 5-hp 1800-rpm constant speed motor. The former can be cycled by manual, gage or automatic methods by setting a selector switch on the electrical control panel. Stroke rate for any of these methods can be regulated to produce up to 50 cpm.

An air cylinder propels cutting unit to and from cutting position. A worm driven gear box with high-low range provides spindle speeds of 200 and 240 rpm. Machine uses a single 8-in. diameter alloy steel cutter disk which can be resharpened to minimum diameter of 5 in. before replacement is necessary. Adjustment for cutting different diameter pipe is made with handwheel. Any length of pipe up to 24 in. can be cut off by positioning the pipe length gage on the gage rod. Made by **Landis Machine Co.**, 40 E. Fifth St., Waynesboro, Pa.

For more details circle NED-574 J7 on enclosed inquiry slip

LOWER COST, SIMPLER, FASTER ASSEMBLY with

PRINTED CIRCUITS

for Radios, TV, Instruments, Military Equipment, Panels, Controls, Gages and Switch Plates

Your Benefits: Shorter assembly lines, Reduced assembly time, Exact circuit reproducibility, Improved reliability, Easier servicing, Miniaturization, Lower inspection costs, Product improvement.

Ask for full information! Offices in principal cities.

Photocircuits CORPORATION
Dept. NED9, GLEN COVE, NEW YORK

World's Largest Producer of "Exclusively Printed Circuits."

For more details circle NED-577 J7 on enclosed inquiry slip

HERE IS INFORMATION YOU NEED ON FLOOR TRUCKS AND HOW TO SELECT THEM

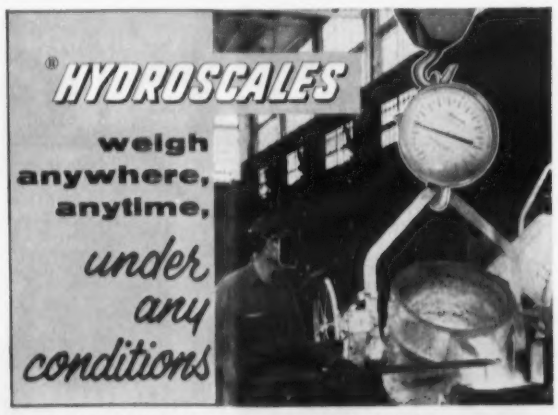
Send for this Catalog!

There's more to correct floor truck selection than meets the eye. To help simplify the problem of equipment selection and specification, send for this information-packed catalog by Hamilton. Clearly illustrates and describes hundreds of trucks for every purpose: platform trucks, two-wheel hand trucks, wagon trucks, box trucks, shelf and tray trucks, dollies, lumber buggies, lift truck systems—and special trucks for many uses.

If you are in need of trucks, tell us how many you can use—we'll send full information promptly along with this informative catalog and the name of your nearest Hamilton representative.

THE HAMILTON CASTER & MFG. CO.
1659 Dixie Highway • Hamilton, Ohio

For more details circle NED-572 J7 on enclosed inquiry slip



SIMPLIFIES INDUSTRIAL WEIGHING— ANYWHERE YOUR CRANE WILL REACH

here are some typical weighing applications

Just a few of the many applications include—foundry charging, batching, pour off applications, checking shipping and receiving weights.

There are 110 Models in the Complete Line. Tare Adjusting Knobs for Net Load Reading. Easy-To-Read Dials Available in 3 Sizes.

HYDROSCALES — guaranteed

They are guaranteed to be free of defects in workmanship and materials, and to be accurate to ½ of 1% of the maximum dial capacity.

Write for descriptive literature explaining model features

HYDROWAY SCALES, INC.
31288 Stephenson Highway • Royal Oak, Michigan

"The world's largest producer of crane scales"

For more details circle NED-575 J7 on enclosed inquiry slip

CUT PRODUCTION COSTS!

MARK NAME PLATES 5 TIMES FASTER

MODEL EMT-1
ELECTRIC TAG TYPEWRITER

A touch of the finger delivers up to 2 tons pressure for deep, legible impressions in metal or plastic tags.

—WITH— *Automark*
ELECTRIC TAG MARKING MACHINES

MODEL SRST-2
HI-SPEED
TAG MARKING MACHINE

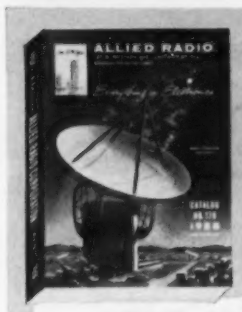
Automatically marks BOTH constant and serial numbers at any desired speed up to 8,000 tags per hour!

MANUFACTURERS' AGENTS
Some Territories Still Available

Send Now for Bulletin

DEFIANCE MACHINE & TOOL COMPANY
1920 S. VANDEVENTER Dep't. QD ST. LOUIS 10, MO

For more details circle NED-578 J7 on enclosed inquiry slip



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Chicago 80, Illinois

our 37th year

Send for FREE Catalog

For more details circle NED-579 J7 on enclosed inquiry slip

POWERFUL NEW-PLUNGER CLEARS CLOGGED TOILETS *in a jiffy!*

Clear messy, stuffed toilets
Cut maintenance costs with

'TOILAFLEX'
Toilet ALL-ANGLE Plunger

Ordinary plungers don't seat properly. They permit compressed air and water to splash back. Thus you not only have a mess, but you lose the very pressure you need to clear the obstruction.

With "TOILAFLEX", expressly designed for toilets, no air or water can escape. The full pressure plows through the clogging mass and swishes it down.

- Accordion-action design to flex at any angle
- Double-size cup blasts double pressure, aimed directly at obstruction
- Tapered suction-grooved tail gives air-tight fit

Get a "TOILAFLEX" for your home too. Positive insurance against stuffed toilet.

$2.65 Fully Guaranteed

Order from your Supplier of Hardware or Janitor Supplies

THE STEVENS-BURT CO., NEW BRUNSWICK, N. J.
A Division of The Water Master Company

For more details circle NED-580 J7 on enclosed inquiry slip

Townsend Lockbolts Provide Efficient Fastening

Townsend Lockbolts* save weight—give higher clinch than rivets—more uniform clinch than nuts and bolts—combine advantages of both—eliminate disadvantages.

Townsend Lockbolts are designed and produced to meet the highest specifications and requirements of any industrial application.

Townsend Lockbolts are available from complete stocks in a wide range of diameters, grip lengths and head styles in alloy steel and aluminum alloy.

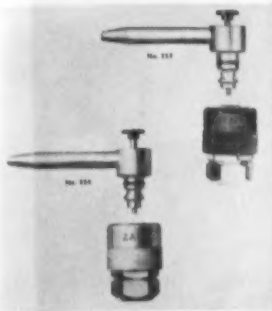
For data on Townsend Lockbolts, write for bulletin TL-101a, Townsend Company, P. O. Box 237-G, New Brighton, Pa.

*Licensed under Huck patents RE 22,792; 2,114,493; 2,527,307; 2,531,048; 2,531,049; and 2,754,703

Townsend Company
NEW BRIGHTON, PA.

For more details circle NED-581 J7 on enclosed inquiry slip

AIR BLOW GUN
fits air line couplings



Made of accurately machined steel components, this snap-action air blow gun is available in two models to fit most existing air line connectors. Lightweight and durable, it is merely snapped into air line and is operated by pushing on convenient button control. Made by **Zalo Mfg. Co.**, Dept. NE, 4893 Van Epps Rd., Cleveland 9, O.

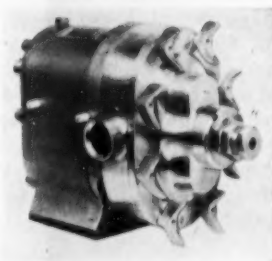
For more details circle NED-582 J7 on enclosed inquiry slip

MOP TRUCK
semipneumatic tires improve mobility

Improvements incorporated in this 56-gal mop truck include sealed ball bearing wheels with 8 x 1.75 semipneumatic tires. It is designed to conserve storage space and has two separate tanks. Features include rounded corners for ease of cleaning, mop shield beneath the wringer to prevent mop from dipping into dirty water, and steel wringer rolls. Stainless and galvanized steel types are offered by **Finnell System, Inc.**, Dept. NED, 5500 East St., Elkhart, Ind.

For more details circle NED-583 J7 on enclosed inquiry slip

VENTED COVER PUMPHEAD
avoids pipeline back pressure



Automatic shutoff of product flow is provided by this vented cover pumphead in the event of equipment breakdown in active pipelines handling from light to heavy or viscous liquids. Manually-controlled model is recommended for normal uses where minimum of 4 to 5 psi differential is sufficient. Pneumatic unit introduces control as fine as 1 psi on back pressures. This involves use of air or CO_2 pressure from a pressure control valve to the vented cover pumphead. Rubber diaphragm seals off passage between suction and discharge side of pump when head pressure becomes excessive. All models of Waukesha sanitary or corrosion-resistant pumps can be equipped with this vented cover. Made by **Waukesha Foundry Co.**, Dept. NE, Waukesha, Wis.

For more details circle NED-584 J7 on enclosed inquiry slip

CURB those re-roping costs with *Electroline* WIRE ROPE FITTINGS

Easiest way to make wire rope *last longer*—and stop excessive costs of re-roping: use Electroline wire rope fittings.

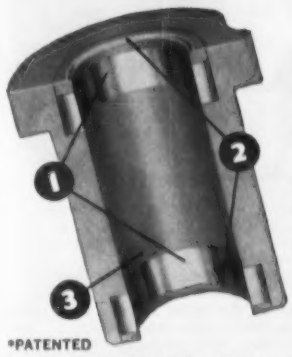
- Tremendous holding power—Electroline's graduated compression grip *holds on "for keeps"*; damps vibration, insures against failures.
- Easy to install—simple job for unskilled workers with ordinary tools; no molten metal or acids.
- Reclaimable—use them again and again—for years.
- A fitting for every need—in the size you want.

Send for the handy illustrated Electroline catalog and full information. A smart move toward sizable savings.

Electroline COMPANY
4121 SOUTH LASALLE STREET • CHICAGO 9, ILLINOIS
In Canada: Powerlite Devices, Ltd., Toronto

For more details circle NED-585 J7 on enclosed inquiry slip

INCREASE PRODUCTION.. SAVE TIME & MONEY



MEYCO
Carbide Inserted Bushings Are Doing It Daily!

How? Like this: (1) Last longer . . . with a life—in most cases—as long as solid carbide bushings at prices that approach the price of steel bushings; (2) Increased life for your drill jigs and fixtures; (3) Increased life for your drills and reamers; (4) Accuracy maintained for a LONG PERIOD of time; (5) Less non-productive machine time, less lost man-hours, because bushings need not be changed as often; (6) Inspection time saved, because of greater accuracy for a longer time; and (7) Less waste due to spoilage, for the same reason. Don't pass up a good bet! Get the dope on MEYCO Carbide Inserted Drill Jig Bushings today!

*PATENTED
1. Tungsten carbide rings at the points of wear; 2. Steel rings protect drills and carbide; 3. Special hardened alloy steel body.

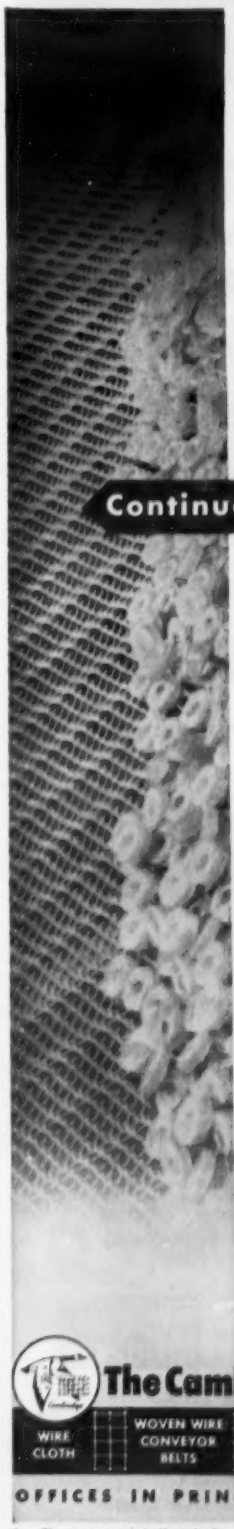
For information and prices write for MEYCO Bushing Catalog No. 49

ESTABLISHED 1888

W. F. MEYERS CO., INC., BEDFORD, INDIANA

For more details circle NED-586 J7 on enclosed inquiry slip

Cambridge



WOVEN WIRE BELTS give you fast, economical processing

Using woven wire conveyor belts to move products through all phases of your manufacturing operation helps speed processing and cuts costly batch handling. Food products, chemicals, plastics, metal parts, ceramics or glass can be treated faster and easier with a continuous belt-to-belt flow through the plant on woven wire belts. EXAMPLE:

Continuous Cooling

MOVING BELT carries hot candy through cooling tunnel in a steady stream. Free circulation of air through open mesh speeds cooling process.

ALL METAL BELT cannot absorb odors . . . remains unaffected by processing solutions, 2100° F. or sub-zero temperatures . . . gives longer life because there are no seams, lacers or fasteners to weaken or break. Rust-proof alloys maintain sanitary requirements.

OPEN MESH also provides free circulation of heat or cold, free drainage of process solutions. Broken bits or chips of the product fall through the open mesh to maintain product uniformity.

SPECIAL RAISED EDGES or surface attachments are available to hold products on belt during inclined travel.

Cambridge Woven Wire Conveyor Belts are made in any size, mesh or weave, from any metal or alloy to do the job you want . . . hot or cold, wet or dry. Call your Cambridge Field Engineer to discuss how you can get fast, economical processing with woven wire conveyor belts. Look under "Belting, Mechanical" in the Yellow Pages. Or, write for FREE 130-PAGE REFERENCE MANUAL.

The Cambridge Wire Cloth Co.

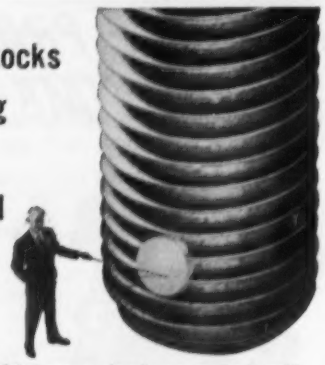
WIRE CLOTH | WOVEN WIRE CONVEYOR BELTS | WIRE CLOTH FABRICATIONS

Department C, Cambridge 9, Maryland

OFFICES IN PRINCIPAL INDUSTRIAL CITIES

For more details circle NED-587 J7 on enclosed inquiry slip

Now Cleveland stocks Nylok self-locking hexagon head cap screws in all standard sizes from ¼ to 1 in.



A Cleveland Nylok* hexagon head cap screw is self-locking—won't work loose. The locking device is a tough, resilient pellet of nylon that forces the mating threads together in a secure metal-to-metal union. All auxiliary locking devices are eliminated. Seated or unseated, the screw locks wherever wrenching stops. And because of "plastic memory," the pellet tends to recover its original shape and the screw can be used repeatedly.

These self-locking cap screws give uniform torque and will not gall or damage threads or seating surfaces. They are not affected by aging or by temperatures from −70° to +250°F. Further, when screws are properly seated, the locking pellet functions as a liquid seal.

You will save on production time when you use Cleveland Nylok self-locking screws. In addition, you can simplify design and reduce size, weight and inventory. Contact your Cleveland distributor for these self-locking screws in all standard sizes from ¼ to 1 in., in high carbon quenched and tempered steel (C-1038).

*T.M. Reg. U.S. Pat. Off., The Nylok Corporation

Write for our new Nylok folder

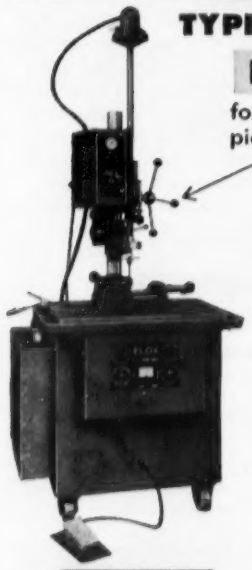
THE CLEVELAND CAP SCREW COMPANY
4444-18 Lee Road, Cleveland 28, Ohio
Warehouses: Chicago • Philadelphia • New York • Los Angeles

For more details circle NED-589 J7 on enclosed inquiry slip

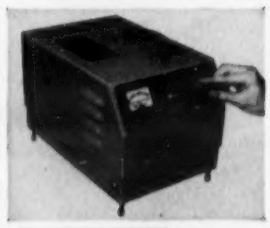
yours for the asking

a simple, economical way to salvage parts made defective by broken taps, drills, reamers or engineering changes

TYPICAL EQUIPMENT



Elox M-700 Electron Drill
for the plant with 10 or more pieces of scrap per day.



Elox M-200 Portable Electron Drill
for the plant with less than 5 parts per day.

Sample Job

This stainless steel valve body was valued at $45 when a #10/40 tap broke in one of the holes. Using a .080 copper electrode an Electron Drill removed the tap in 5 minutes!

Incidentally . . .
It took an operator 20 minutes to tap 4 base holes in this same valve.

When the operator saw how fast and easy broken taps could be removed, he reduced his machining time to 5 minutes per piece.

Elox Electron Drills are also used in many forms of die salvage . . . drilling bolt holes, tapered pin holes, coolant holes, lubricant holes . . . in the fully hardened state.

We believe we can save you time and money — Why not write

elox corporation of michigan *T. M. Reg.
1838 N. Stephenson H'wy., Royal Oak 3, Mich.

For more details circle NED-590 J7 on enclosed inquiry slip

MICROFILM VIEWER-ENLARGER
also produces 18 x 24-in. prints

This Microtronics 35 or 70-mm microfilm viewer-enlarger allows viewing of project prints on an 18 x 24-in. translucent screen. It will also process prints therefrom or translucent masters up to 18 x 24 in. for 35 or 70-mm microfilm. Unit will operate in drafting room without plumbing or special electrical hookup. It produces two 18 x 24-in. prints per minute continuously after 2 1/3 minutes of initial processing. Source film can be negative or positive. A model for both E.A.M. aperture cards and 35-mm roll film, and a model for both cut frame and roll 70-mm film are available. Made by **Photostat Corp.**, Box 1970E, Rochester 3, N. Y.

For more details circle NED-591 J7 on enclosed inquiry slip

AIR COMPRESSORS
15 and 20-hp two-stage units offered

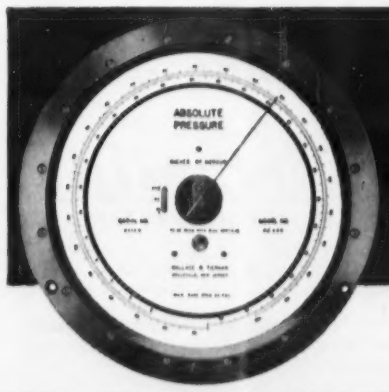
Two-stage air compressors in 15 and 20-hp ratings are being offered for heavy-duty operation in all industrial applications. Model B-462-B, 20-hp tank-mounted compressor shown is available with dual control which provides both automatic start-stop and constant speed operation. Both this unit and the 15-hp model B-462-A are available as remote tank units, or base-plate mounted either with or without controls. Pumps feature centrifugal unloaders for no-load starting, head design which permits removal of valves without disconnecting coolers or removing cylinder head, V-ring lubrication and insert bearings on connecting rods. Made by **American Brake Shoe Co.**, Kellogg Div., Dept. IND, 97 Humboldt St., Rochester 9, N. Y.

For more details circle NED-592 J7 on enclosed inquiry slip

Hard Surfacing Electrodes

Metal & Thermit Corp.—Murex Hardex hard surfacing electrodes best suited to hundreds of different applications are charted in 20-page booklet. Data on how to decrease porosity, cracking, penetration and weld metal dilution with the low hydrogen electrodes are included. Physical and chemical properties of typical deposits for each of 16 electrodes are presented.

For more details circle NED-593 J7 on enclosed inquiry slip



W&T PRECISION ANEROID MANOMETER FA-129

THE CALIBRATING STANDARD
...For Absolute Pressure Work

Ranges: 0-31.5 inches thru 0-100 inches of Hg. absolute in five ranges—45 inch scale in two revolutions.
Accuracy: 1/1000 of full scale
Sensitivity: 1/10,000 in *all* ranges
Write for Publication No. TP-15-A

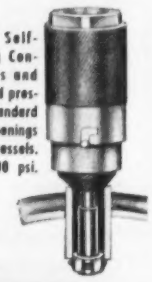
WALLACE & TIERNAN INCORPORATED
25 MAIN ST., BELLEVILLE 9, N. J.
In Canada: Wallace & Tiernan, Ltd., Toronto
A-114

For more details circle NED-594 J7 on enclosed inquiry slip

SAVE TIME TESTING PRESSURE VESSELS
Seal Any Opening in 2 SECONDS
WITH "Quick-Seal"
TEST PLUGS AND FILLING CONNECTORS

"Quick-Seal" Test Plugs and Filling Connectors will reduce pressure test costs by sealing virtually any opening in 2 seconds or less. Can be used in unfinished or finished holes—shallow or deep—to provide leak-proof seal of air or liquid pressures up to 500 psi or greater. "Quick-Seal" Test Plugs and Filling Connectors are widely used by manufacturers of tanks, boilers, drums, castings, radiators, etc. . . . and are sold on a guaranteed satisfaction basis.

"Quick-Seal" Self-Sealing Test Plugs—use test pressure to insure leak-proof seal. Capacities to 500 psi.



"Quick-Seal" Self-Sealing Filling Connector—adapts and seals air or liquid pressure lines to standard or extra deep openings in all types of vessels. Capacities to 500 psi.

"Quick-Seal" Expanding Seal Test Plugs and/or Filling Connectors—manual or pneumatic types for low pressure testing. Can be used in rough or machined openings in all types of vessels, systems and assemblies.

Get complete details on time saving "Quick-Seal" Plugs and Connectors. Write for free illustrated catalog today.

MECHANICAL PRODUCTS CORPORATION
176 North Ogden Avenue, Chicago 7, Illinois

For more details circle NED-595 J7 on enclosed inquiry slip

Multi-purpose hydraulic power packages for all industry

NEW **BLACKHAWK HOLL-O-RAMS**

Sensational Blackhawk HOLL-O-RAM design harnesses hydraulic force for *straight-through pulling* or direct pushing!

and work-saving
HYDRAULIC PULLERS

Push-Puller in 3 capacities — no galled shafts, no damaged parts!
Double-Grip Puller in 3 capacities — grips tighter as load increases!
Triple-Grip Puller in 3 capacities — non-distorting, friction-free pulling!

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BLACKHAWK
BLACKHAWK MFG. CO., Dept. H-1497, Milwaukee 46, Wis.
"World's Largest Manufacturer of HYDRAULIC POWER TOOLS"

For more details circle NED-596 J7 on enclosed inquiry slip

Silicone — HI-LO TEMPERATURE RANGE
Withstands temperature extremes ranging from −130° to +600° F.

Silicone — CORROSION RESISTANT
Withstands many chemicals, oils, moisture and oxidation.

Silicone — DEPENDABLE OPERATION
Stays on the job under extreme operating conditions that cause ordinary rubber parts to fail.

Silicone — REDUCED MAINTENANCE COSTS
Silicone rubber parts have longer life . . . greater dependability . . . slash maintenance costs.

Silicone — RUBBER PARTS BY **STALWART**

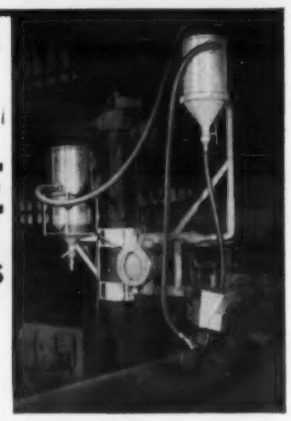
7642-SR

STALWART RUBBER COMPANY
151 Northfield Road, Bedford, Ohio

Write for Bulletin 56-SR-3

For more details circle NED-597 J7 on enclosed inquiry slip

• Automatic operation of Invincible installation makes possible complete recovery of unfused flux from circumferential butt weld operation.



INVINCIBLE
WELDING FLUX RECOVERY SYSTEMS
Reclaim Flux Automatically... Give Big Return on Investment

With Invincibles on submerged arc welding jobs, one manufacturer salvages 100 pounds of flux daily . . . another reclaims $400 worth a day. Value of material *alone* repaid cost of units in a few weeks.

Invincible units recover all unfused flux, remove powder and return slag-free, dust-free flux to the welder in a *continuous* flow. They also save costly man-hours over manual methods, speed production and minimize rejects by eliminating flux flour. Compact, flexible Invincibles are ruggedly built for long service.

WRITE FOR FOLDER describing wide range of automatic and manual models.

INVINCIBLE VACUUM CLEANER MFG. CO.
DOVER, OHIO

▲ For more details circle NED-598 J7 on enclosed inquiry slip ▲

ANNOUNCING

1. **MAGNETIC SNAP-ACTION** operates pilot valve
2. **POWER OPERATION** using the energy in your pneumatic system
3. **AUTOMATIC MECHANISM** only TWO moving parts

Write for Bulletin 501

HANKISON CORPORATION
951 BANKSVILLE ROAD · PITTSBURGH 16, PA.

▲ For more details circle NED-599 J7 on enclosed inquiry slip ▲

STRAP PACKAGES AUTOMATICALLY on the USS GERRARD Model 12

Up to 24 ties per minute on this automatic round strapping machine. Lowest-cost automatic on the market. Straps packages from 8" x 2" up to 26" x 20". Handles varied-size packages without adjusting. Uses USS GERRARD Round Strapping—14 ga. thru 18 ga. Tension can be pre-set. One-shot lubrication cuts maintenance costs. Model 12 needs only 11½ sq. ft. of floor space. Want to know more about this automatic strapping machine? Write to:

GERRARD STEEL STRAPPING DIVISION, UNITED STATES STEEL CORPORATION
4717 South Richmond Street, Chicago 32, Illinois

USS GERRARD
ROUND STEEL **STRAPPING** FLAT STEEL
UNITED STATES STEEL

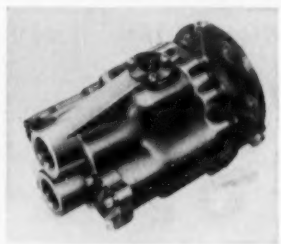
▲ For more details circle NED-600 J7 on enclosed inquiry slip ▲

AIR-OPERATED PUMP
handles food products, corrosives

This stainless steel air-operated reciprocating pump can be used for such widely diverse applications as handling food products or corrosive materials used to brighten or revitalize natural metal surfaces. Replacement of cups and seals involves only a few minutes work. Pump will handle fluids ranging in temperature from −30 to 220° F at discharge outlet pressure of 1½ times the incoming air pressure. It operates on 30 to 200 psi air supply and pumps from 1 to 20 gpm. Material is delivered on both up and down strokes without pulsation. Made by **Balcrank Inc.**, 1400 Disney St., Cincinnati 9, O.

▲ For more details circle NED-601 J7 on enclosed inquiry slip ▲

HYDRAULIC PUMP
compact unit delivers up to 50 hp

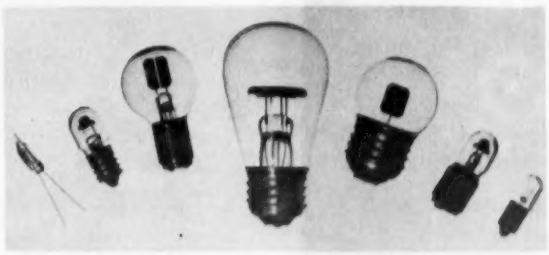


Having a ratio of 2.8 hp per lb, Stratopower 64W-1000 variable delivery hydraulic pump is rated 10 gpm at 1500 rpm and can be operated continuously at 4500 rpm. Measuring 9⅛ x 6¼ in., this 19-lb packaged unit delivers up to 50 hydraulic horsepower. Pressure differential at operating speed between full flow and zero flow is less than 50 psi. Pump is particularly suited for aircraft use including servo applications. Made by **New York Air Brake Co.**, Watertown Div., Dept. 27, Starbuck Ave., Watertown, N. Y.

▲ For more details circle NED-602 J7 on enclosed inquiry slip ▲

MINIATURE GLOW LAMPS
for pilot and indicating uses

Supplementing a standard line of miniature incandescent types, these glow lamps include both neon and argon types. Sizes and variety of bases and



mounting types adapt them for a wide range of pilot light, indicating and signalling services. They operate on extremely low wattages. Made by **Hudson Lamp Co.**, 528 Elm St., Kearny 5, N. J.

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AIR and HYDRAULIC CYLINDERS

QUICK-CHANGE PACKING CARTRIDGE CUTS DOWNTIME

Removable packing cartridge is just one of many modern design features of S-P all-steel cylinders. Made in a wide range of mountings and bore sizes. Prompt deliveries. Send for catalog on Hydraulic Cylinders or Standard Air Cylinders or Heavy-Duty Air Cylinders. The S-P Manufacturing Corp., 30201 Aurora Rd., Solon, Ohio.

SEND FOR Catalog

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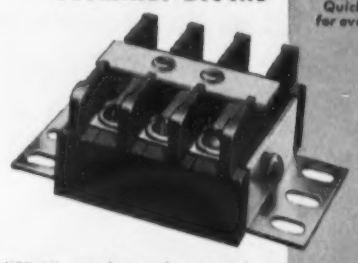
SOLON, OHIO · IN GREATER CLEVELAND
Established 1916
A Bassett Company
ROTATING AIR AND HYDRAULIC CYLINDERS • POWER CHUCKS
NON-ROTATING AIR AND HYDRAULIC CYLINDERS
COLLET AND DRILL PRESS CHUCKS • AIR PISTONS,
VALVES, ACCESSORIES

▲ For more details circle NED-604 J7 on enclosed inquiry slip ▲

Save space and time in wiring

with **CURTIS Type "CDM" Terminal Blocks**

Curtis Terminal Blocks Make Better Connections Economically—Quickly. A type for every purpose.



The "CDM" was designed to provide a systematic method of terminating wires in the general application. They save time and space, and offer clear identification of circuits on the white marker strip running thru center of block. They are recommended for use in temperatures under 150° F. Conservatively rated at 30 amps, 750 volts. The "CDM" is factory assembled with any number of terminals from 1 to 50.

Ask for Bulletin DS-116. Also learn about wide selection of other available Curtis Blocks.

CURTIS DEVELOPMENT & MFG. CO.
3206 North 33rd Street Milwaukee 16, Wisconsin

▲ For more details circle NED-605 J7 on enclosed inquiry slip ▲

OUTPERFORMS and Out Values all lift trucks in its class
Regardless of Price!

ENGINEERED YEARS AHEAD
- Complete bearing control throughout
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- Equipped with automatic charger and heavy duty industrial battery
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OPERATES IN 28" AISLES

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AT LOW COST - FOR MANY DIFFERENT MIXING JOBS!

The **PATTERSON**

TYPHOON

PORTABLE POWER MIXER

If you have a batch mixing problem, solve it with TYPHOON Portable Mixers! A single unit serves several tanks or kettles—easy to carry from point to point, light, powerful, sturdy, long-lived. Direct or geared drive models from 1/4 to 3/4 HP. Write!

The Patterson Foundry and Machine Company
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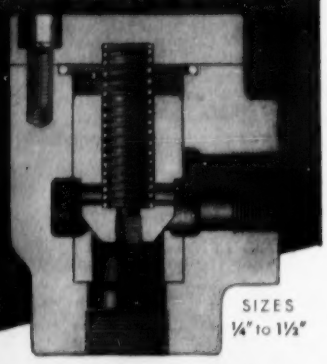
East Liverpool, Ohio, U. S. A.
The Patterson Foundry and Machine Company, (Canada) Limited
Toronto, Canada

For more details circle NED-607 J7 on enclosed inquiry slip

RIVETT

Hydraulic check valves



PIPE THREAD OR FLANGE CONNECTED

SPRING CLOSED OR PILOT OPERATED

MOUNTED IN ANY POSITION

3000 P. S. I.

SIZES 1/4" to 1 1/2"

Model 8640, Spring Closed • Model 8642, Pilot Operated
Model 8644, Pilot Operated with Pressure Breaker

Allow free flow in one direction, but prevent flow in opposite direction. Large areas through valve permit unusually large volume. Ex: 1 1/2" valve has 104.2 G.P.M. capacity at 15 ft. per sec.

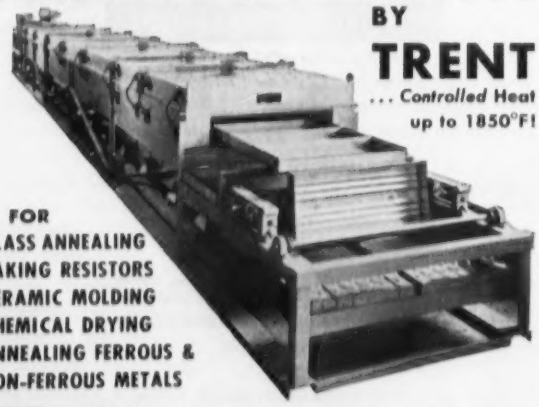
Call Your Local Rivett Dealer Or Write Direct

RIVETT LATHE & GRINDER, Inc., Dept. NED 9 Brighton 35, Boston, Mass.
Rivett Furnishes A Complete Power Package

For more details circle NED-608 J7 on enclosed inquiry slip

CONVEYOR FURNACES BY TRENT

... Controlled Heat up to 1850°F!



FOR
GLASS ANNEALING
BAKING RESISTORS
CERAMIC MOLDING
CHEMICAL DRYING
ANNEALING FERROUS & NON-FERROUS METALS

Trent Furnace approximately 50 ft. long utilizes Trent "Folded-and-Formed" heating element in ceramic insulators inserted in refractory insulation. Provides the greatest radiating surface per square inch of element cross section of any electrically heated conveyor furnace! Permits *positive* temperature control—from hot to cool. Equipped with complete controls and control panel where desired.

703

LET TRENT ENGINEERS CUSTOM-DESIGN the conveyor furnace to meet your job requirements. Trent "Folded-and-Formed" heating elements can mean trouble-free service ... *wherever* controlled, high-temperature heat is required. Contact a Trent representative for engineering service—or write for Bulletin 75-TC.

TRENT INC.
Electrically Heated Industrial Equipment
242 LEVERINGTON AVE., PHILA. 27, PA.
In Canada: Supreme Power Supplies Limited, Toronto 18

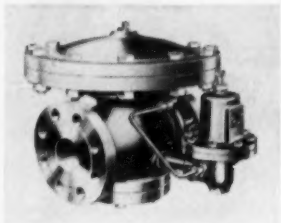
For more details circle NED-609 J7 on enclosed inquiry slip

ELECTRIC DRILL
has rotating and impact actions

Both pneumatic impact action for masonry drilling, plus conventional drill action for work in wood and metal are afforded by this 1/4-in. 3-amp electric Uni-Drill. Impact action is obtained by means of two double cams, one fixed and one rotating, and a 30-lb preloaded spring. Power developed is measured at 90,000 impact pound per minute. Selector control is turned to release internal impact cam, allowing conventional drill action. Drill speed is 2500 rpm; 1700 rpm under load. Unit weighs under 6 lb and requires 15 lb pressure to drill at normal rate. It has 1/4-in. Jacobs chuck and is furnished with adaptors for 3/16 to 1-in. masonry drills. Made by **Power Tools Corp.**, 1430 Lakeside Ave., Cleveland 14, O.

For more details circle NED-610 J7 on enclosed inquiry slip

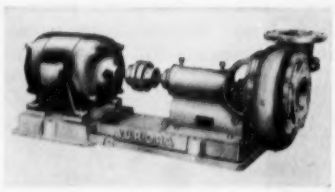
STEAM REDUCING VALVE
pilot operation obtained from inlet



Improved version of the pilot - operated reducing valves for steam service is this self-operated 92B model which obtains pilot operating medium directly from inlet. This feature makes unit practical for applications where air or gas is not available or suitable as an operating medium. Unit is designed to minimize clogged orifices, sticky valves, diaphragm rupture, and similar problems. Made by **Fisher Governor Co.**, Dept. NE-857, Marshalltown, Iowa.

For more details circle NED-611 J7 on enclosed inquiry slip

NONCLOGGING WASTE PUMPS
in horizontal and vertical models



Series of horizontal and vertical nonclogging pumps includes sizes ranging from 3 to 5-in. suction and discharge diameters. Pumps are designed to elevate sewage, pump sludge, or handle heavy or stringy solids, effluent and other wastes. Mono-Vane single-passage impellers can be trimmed to various diameters at the factory, or by user to meet specific head and capacity requirements. Dynamic and hydraulic impeller balance is retained without need for separate counterbalance. Discharge can be turned to various positions. Made by **New York Air Brake Co.**, Aurora Pump Div., 37 Dearborn St., Aurora, Ill.

For more details circle NED-612 J7 on enclosed inquiry slip

DFPA TESTED QUALITY

Fir Plywood

LIGHT, STRONG, DURABLE, REAL WOOD PANELS

For: BUILDING AND MAINTENANCE, SHIPPING CONTAINERS, PALLETS, PARTS BINS, PARTITIONS, TANKS, 1000 OTHER INDUSTRIAL USES

MORE versatile than any other material, fir plywood combines the workability of real wood, the economy of large size, the strength and rigidity of engineered panel construction. When you specify DFPA grade-trademarks, you're assured tested quality that meets strict industry requirements.

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Tacoma 2, Wash., Dept. 181 (Good USA Only)
☐ Please send Fir Plywood Purchasing Guide
☐ Information about using plywood for . . .

Name
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Firm
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City Zone State

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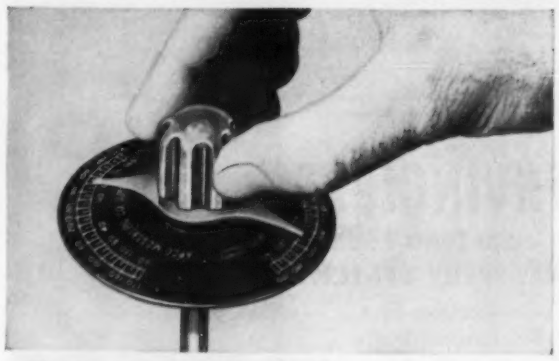

Easy-to-read dials speed torque measurements

Fast, accurate readings are yours at a glance with Apco Mossberg Torque Screwdrivers. Large, white-on-black dial faces easily visible at arm's length. Rugged construction and built-in accuracy make Apco Drivers ideal for electrical, electronic or instrument assembly or repair work. Available in wide range of sizes from inch grams to inch ounces.

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APCO MOSSBERG COMPANY
161 Lamb Street, Attleboro, Mass.

For more details circle NED-614 J7 on enclosed inquiry slip

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FOR 35 YEARS

We supply any part or complete equipment . . . Special turntables made to order

INDEXING TURNTABLES
MORE THAN 100 DIFFERENT TYPES

- FOR WELDING • BRAZING • SOLDERING • SPRAYING
- GLASS INSULATOR MELTING AND GLASS GLAZING with rotating stations and indexing with barrel cam or Geneva gear action.
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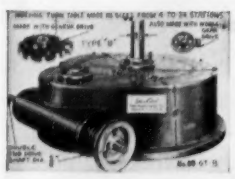
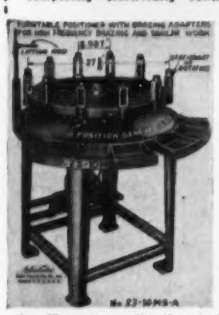


Eisler Indexing Turntables are completely electrically controlled



AND CAMS MADE TO YOUR SPECS!

Manufacturers' representatives wanted

EISLER ENGINEERING CO., INC.
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Charles Eisler, Jr., President

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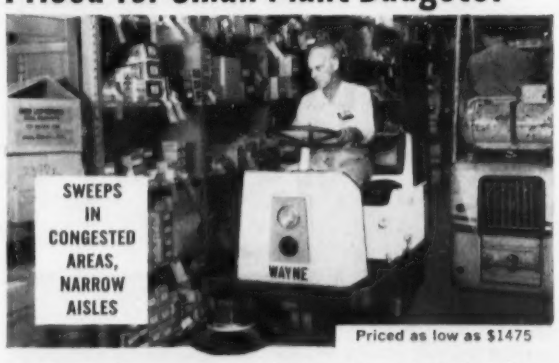
NEW! COMPACT POWER SWEEPER Priced for Small Plant Budgets!



Priced as low as $1475

Here's the answer for efficient power sweeping for plants of all types and sizes. The new WAYNE "704" power sweeper is smaller yet engineered to sweep faster, better.... in and around tight spots, closer to machinery and equipment.

Superior features in every way—

1. No dust bag to empty. Dust-free operation.
2. More effective dirt hopper capacity.
3. Powered and geared for all sweeping conditions.
4. Longer-wearing brushes get all the dirt.
5. Vacuum cleaning attachments available.

For literature or demonstration write:

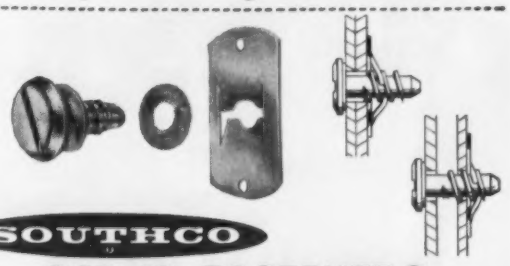
new WAYNE '704'

WAYNE MFG. CO. · 1377 E. Lexington Ave., Pomona, Calif.
World's Largest Producer of Power Sweepers for Cities and Industry

For more details circle NED-616 J7 on enclosed inquiry slip

for quick attachment and removal . . .

through wide range of thickness



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SCREW FASTENERS

Ample tolerance, inherent in Southco Screw Fastener design, permits use of one grip size for many jobs, simplifies stock requirements. "Floating" screw assembly eliminates alignment problems. Rugged, strong, no springs . . . easy to install.

Write today for free copy of 52 page Fastener Handbook. Southco Division, South Chester Corporation, 243 Industrial Highway, Lester, Pa.

SOUTHCO FASTENERS LION

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▲ For more details circle NED-617 J7 on enclosed inquiry slip ▲

For HIGHEST ELECTRICAL & MECHANICAL *Efficiency!*

New

JONES 2400 SERIES

PLUGS & SOCKETS

Improved Socket Contacts. Four individual flexing surfaces. Positive contact over practically their entire length.

Both Plug and Socket Contacts mounted in recessed pockets greatly increasing leakage distance, INCREASING VOLTAGE RATING.

Plug and Socket Contacts cadmium plated. Add to appearance of your equipment.

Interchangeable with Jones 400 Series.

Ask for Catalog 21, Complete line Jones Plugs, Sockets, Terminal Strips.

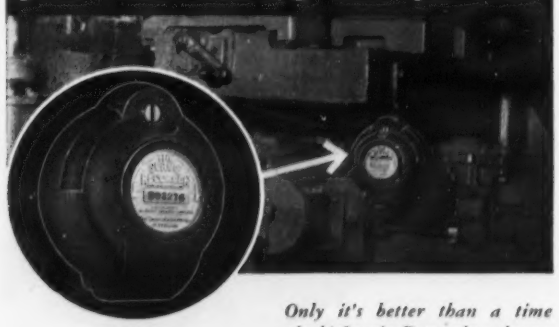
P-2406-CCT
Plug — with cable clamp in top.

S-2406-SB
Socket with shallow bracket for flush mounting.

Jones — HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

▲ For more details circle NED-618 J7 on enclosed inquiry slip ▲

Here's a time clock your machinery can punch!



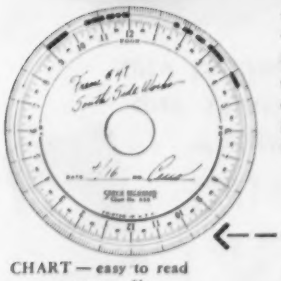


CHART — easy to read . . . easy to file.

Only it's better than a time clock! Servis Recorder shows every minute of working time and loafing time your machinery puts in. Circular charts are recorded with fine lines for down time and wide bands for productive time.

With **SERVIS RECORDER** you know exactly how much work you get from every machine.

THE SERVICE RECORDER COMPANY
1013A Rockwell Ave., Cleveland 14, Ohio

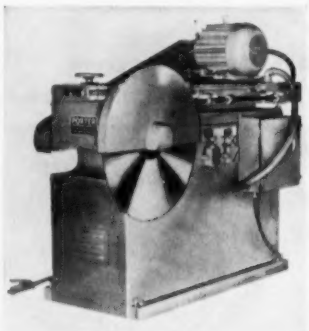
▲ For more details circle NED-619 J7 on enclosed inquiry slip ▲

INTERNAL DIAMETER GAGE
has 3/8 to 1½-in. diameter range

Entirely mechanical PG-800 internal diameter gage is a portable comparator-type instrument with range from 3/8 to 1½ in. It has reading scale of 0.005-in. calibrated in 50-millionths graduations. Accuracy is within 0.000020-in. Magnification is 1000:1. Gage is instant reading and repeats consistently. Movable face plate allows exploration of holes up to 3 5/16 in. deep. Instrument is especially useful for checking out-of-round, taper, barrel, or bellmouth. Made by **Sunnen Service Co.**, Dept. ED, 7900 Manchester Ave., St. Louis 17, Mo.

▲ For more details circle NED-620 J7 on enclosed inquiry slip ▲

CUT-OFF SAW
for heavy duty nonferrous cutting



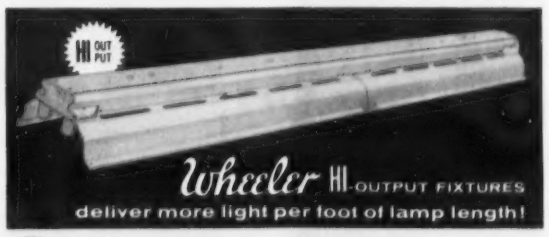
Available with 24 and 36-in. strokes, No. 45 automatic nonferrous metal cut-off saw has a hydraulically operated carriage which is adjustable for cutting and return feed speed variations from 0 to 55 fpm. In use, operator simply positions stock, presses an electrically operated foot pedal, and the cutting cycle is automatic. Made by **C. O. Porter Machinery Co.**, 659 Front Ave. N.W., Grand Rapids, Mich.

▲ For more details circle NED-621 J7 on enclosed inquiry slip ▲

MIDGET TRACTOR
hydraulic dump now optional

A hydraulic dump is now optional equipment on this Speedcat midget tractor. Bucket can be held rigidly at any angle with the ground and rotated while in motion to scoop largest possible load. By rolling bucket lip up, loads heaped above the rim, or even wet or liquid materials can be retained. Typical operation is delivering of dry concrete to mixer and carrying away wet cement. Tractor will crawl over steep or soft places impossible for a wheel tractor, or even a wheelbarrow. Made by **Mead Specialties Co.**, Dept. SC-115, 4114 N. Knox Ave., Chicago 41, Ill.

▲ For more details circle NED-622 J7 on enclosed inquiry slip ▲



HI-OUTPUT "D-8500" LINE FIXTURES by Wheeler — designed for use with 100 watt and 60 watt rapid start lamps operating at 800 MA. Diffuser apertures provide a small upward component of light to relieve severe brightness contrast . . . and allow for heat dissipation. Wheeler "D-8500" Hi-Output Fixtures are ideally suited for medium to high mounting applications.

Ask your electrical wholesaler — or write

Wheeler Reflector Company
DIVISION OF FRANKLIN RESEARCH CORP.
275 Congress Street, Boston 10, Mass.

▲ For more details circle NED-623 J7 on enclosed inquiry slip ▲

Shuts Doors, Windows, Stops Conveyors, Sounds Alarm.....

KILLS TOUGH FIRES!

Randolph

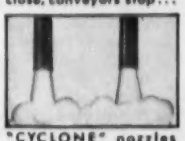
EXTINGUISHING SYSTEMS

Where fire hazards are severe and access limited . . . play safe! Be ready and secure with a *fast action* Randolph Automatic Fire Extinguishing SYSTEM!

Write today for Randolph's free FIRE HAZARD INDEX listing equipment safeguards for 580 typical fire hazards. Randolph Laboratories, Inc., 7 East Kinzie Street, Chicago 11, Illinois.

A fire! Detector "triggers" entire system . . .

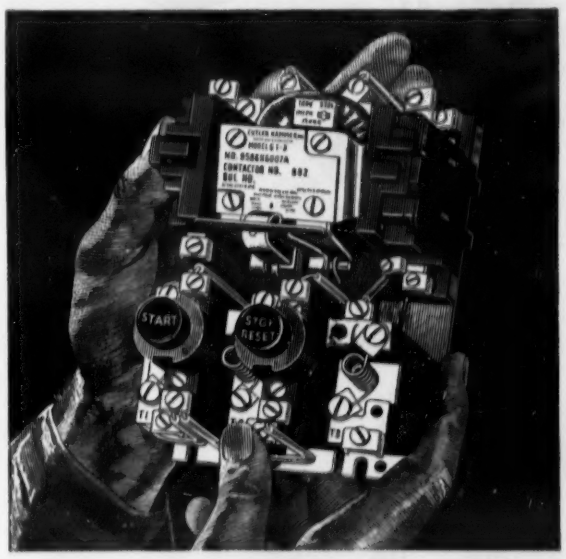
Doors and windows close, conveyors stop . . .



"CYCLONE" nozzles flood entire room with CO_2 in 15 seconds.

▲ For more details circle NED-624 J7 on enclosed inquiry slip ▲

WHAT'S NEW IN MOTOR CONTROL?



STANDARD CONTROL COMPONENTS FOR FULL THREE-PHASE SAFETY

The chief designing engineer of a prominent machinery builder says, "As machines become more automatic, electric motors become a more integral part of machines and any trouble with motors can prove unbearably expensive in downtime and repair expense. We believe it foolish to chance motor burnouts avoidable with three-coil overload relays, especially since standard components now available provide such protection with no panel crowding and so little extra cost."

Only Cutler-Hammer Three-Star standard control components provide this protection. For complete design data, write on your company letterhead for Pub. EE120, "Panel Builders Handbook". No charge or obligation. CUTLER-HAMMER, Inc., 1377 St. Paul Avenue, Milwaukee 1, Wis.

CUTLER-HAMMER
MOTOR CONTROL
CH

GET IT FIRST IN CUTLER-HAMMER

▲ For more details circle NED-625 J7 on enclosed inquiry slip ▲

FREE GUIDE! to product development

PM-88

Expanded aluminum will improve a wide variety of products.

As expanded metal, aluminum loses none of its original qualities, but assumes the added features of up to 80% reduction in weight per square foot, high percentage of open area and greater strength and rigidity than the original sheet.

Free catalog 507-EM includes sizes, weights, dimensions and typical applications.

PENN METAL COMPANY, INC.

General Sales Office: 40 Central St., Boston 8, Mass.
Plant: Parkersburg, W. Va.

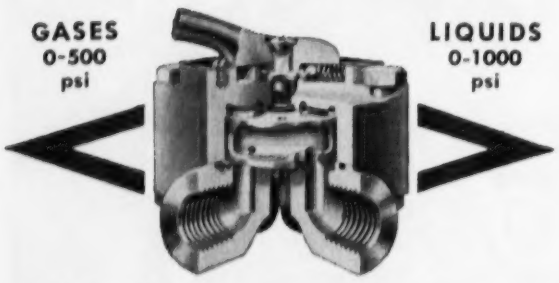
For more details circle NED-626 J7 on enclosed inquiry slip

REPUBLIC

New **SEAL-TITE VALVES**
PRESSURE BALANCED

GASES 0-500 psi

LIQUIDS 0-1000 psi



- ⅛" to 1" FPT
- −65° to 160°F
- 2, 3, 4-way
- Turning ease
- Zero leakage
- Increasing pressure tightens seals.
- Positive flow control

Ask for Catalog No. 356

Distributors in principal cities coast to coast

189

RM REPUBLIC MANUFACTURING CO.
15655 BROOKPARK ROAD • CLEVELAND 11, OHIO

For more details circle NED-627 J7 on enclosed inquiry slip

Hardness Readings in 2 seconds!

Webster PORTABLE **Hardness Testers** FOR NON-FERROUS METALS

TWO LOW-COST MODELS differing in sensitivity for rapidly testing hardness of aluminum, brass, copper, etc. No training required; one hand operation. Hardness readings in 2 seconds anywhere in shop. Can be correlated to standard hardness scales. Quick reading dial. Special anvil design tests all shapes: sheets, extrusions, tubing, strip stock. Capacity ¼". Simple, rugged design, easy maintenance.

Free FOLDER provides full information and shows sectional views.

MODEL B Direct hardness readings on all aluminum alloys.

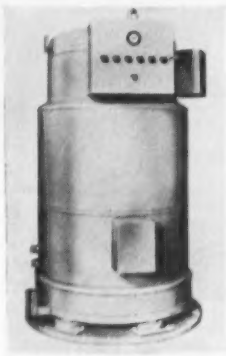
MODEL B-75 Direct hardness readings on copper, brass, etc.

Other models available

WEBSTER INSTRUMENT INC. DEPT. N, 11856 Mississippi Ave. Los Angeles 25, California.

For more details circle NED-628 J7 on enclosed inquiry slip

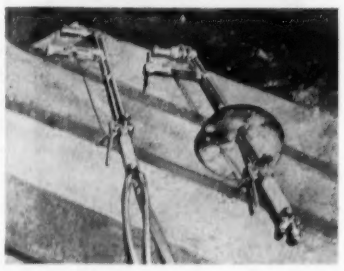
VERTICAL MOTOR-GENERATORS rated up to 350 kw at 1000 cycles



Easy replacement of parts is major feature of line of vertical, high-frequency motor-generators designed primarily for induction heating applications. Top-mounted load bearing and two-piece wrap-around water jacket can both be removed with no basic machine disassembly. Although rated Class B, the generator is Class F insulated (epoxy). Ratings are up to 350 kw at 1000 cycles and 150 kw at 10,000 cycles. Larger ratings have two independent generator sections from which independent voltages can be used to operate separate sections. Surge voltage protection is supplied as standard. Made by **Safety Industries, Inc.**, Star-Kimble Industrial Motor Div., 1287 Dixwell Ave., Hamden, Conn.

For more details circle NED-629 J7 on enclosed inquiry slip

SCARFING TORCH preheating and scarfing oxygen flows are independently controlled



Three hoses of this scarfing torch allow independent control of preheating and scarfing oxygen flows. Thus, preheat flow can be maintained despite violent changes in scarfing oxygen flow during torch use. Torch is used to remove seams, scabs, cracks, or laps from billets, ingots, and slabs. Features include a replaceable guard over the torch head and an improved skid ring on the end of the tip, both of wear-resistant alloys.

Scarfing lever, preheat oxygen adjustment, and acetylene valve are conveniently placed with respect to operator's hands and stance. Model 33 shown has capacity of 6000 cfh of scarfing oxygen at a station regulator outlet pressure of 100 psi when used with 50 ft of ½-in. hose. Tip sizes of ½, ⅝, and ¾ in. are available. Made by **National Cylinder Gas Co.**, 846 N. Michigan Ave., Chicago 11, Ill.

For more details circle NED-630 J7 on enclosed inquiry slip

Copper & Copper Alloy Specifications

American Brass Co.—28-page publication B-34 is an enlarged edition of "Copper & Copper-Alloy Specifications Index." Section I lists generally used alloys and products of company, and specifications of eight agencies. Section II lists specs in numerical order with brief description, and Section III tabulates chemical compositions of all Anaconda metals.

For more details circle NED-631 J7 on enclosed inquiry slip

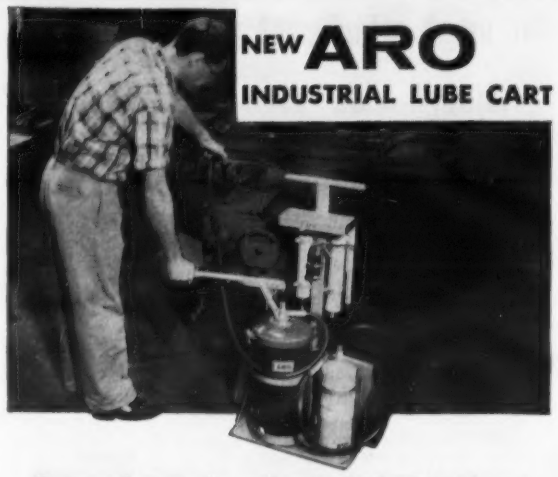
Chief of Engineers say:
"Heap big saving on die cost with T-J CUTTERS!"

Smoke out facts—plain to see that Chief makes sense! T-J Cutters plenty rugged. Raise um feed. Reduce um die cost. Follow trail of many tribes—use T-J for tough die sinking milling. Chief knows you will like! Sign treaty now for T-J Cutters. Good medicine for high production, lower costs!

Yes, T-J makes the kind of he-man Cutters you need. Designed for speed, accuracy and long life . . . less breakage . . . more work between grinds! Made from an extremely high grade steel . . . properly machined . . . scientifically heat-treated and accurately ground. Wide range of styles and sizes. Send smoke signal or write for new catalog No. 1055. The Tomkins-Johnson Co., Jackson, Mich.

T-J TOMKINS-JOHNSON

For more details circle NED-632 J7 on enclosed inquiry slip



NEW **ARO** INDUSTRIAL LUBE CART

Speed up in-plant lubrication!

Complete multi-purpose lubricator.
Portable—goes anywhere!
Cuts lube time to minimum.

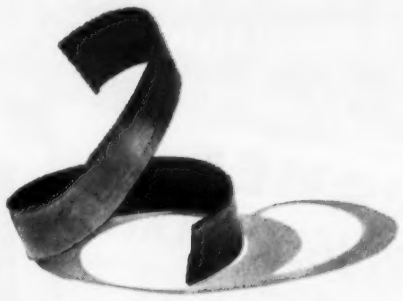
Carries ARO-PAK for safer one-hand operation, fluid lubricant pump, hand gun, suction gun, hand oiler, and E-Z outs for replacing fittings.

See your industrial distributor or write for Bulletin No. 105.

THE ARO EQUIPMENT CORPORATION
GENERAL OFFICES—BRYAN, OHIO
Plants at Bryan and Cleveland, Ohio
Aro of California, 3141 S. Grand Avenue, Los Angeles 7. . . Aro Equipment of Canada, Ltd., Toronto 15, Ontario
Offices in All Principal Cities

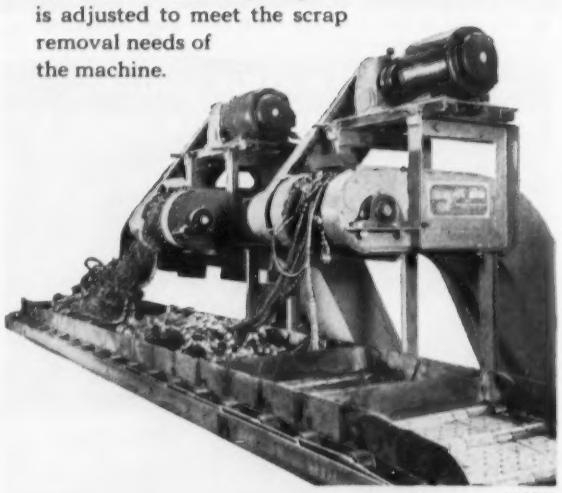
ARO® **INDUSTRIAL LUBE EQUIPMENT**
ALSO . . . Air Tools . . . Air Hoists . . . Aircraft Products . . . Grease Fittings

For more details circle NED-633 J7 on enclosed inquiry slip



LOOK... NO HANDS!

That's right! The May-Fran CHIP-TOTE permits the continuous operation of machine tools by eliminating down-time for scrap removal . . . skilled workers stay on the job . . . production increases by as much as 20%! Versatile CHIP-TOTE conveyors are available in a wide range of sizes to serve practically any type or size of machine tool. Conveyor speed is adjusted to meet the scrap removal needs of the machine.



7722-MF

REMOVE CHIPS, TURNINGS AND BORINGS CONTINUOUSLY AND AUTOMATICALLY WITH A MAY-FRAN CHIP-TOTE

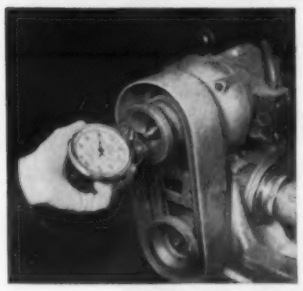
Write today for your copy of Bulletin MF-640.

MAY-FRAN ENGINEERING, INC.
1711 Clarkstone Rd. Cleveland 12, Ohio

For more details circle NED-634 J7 on enclosed inquiry slip

Measure RPM's, FPM's and YPM's

the precise way with a Jones Portable Hand Tachometer



Continuous indication of speed with instant response — An outstanding feature of this hand tachometer is that it accurately indicates the slightest fluctuation in speed. It operates on the centrifugal, mechanical principle. These Jones Tachometers are in use for checking the speeds of electric motors, plant machinery and equipment, generators, engines, pumps, conveyors and other variable speed apparatus.

Many different models and speed ranges—Jones Tachometers and Speed Indicators are available in many different models and cover a wide range of speeds and are selected according to the application, which may be marine engines, diesel engines, railway locomotives, textile machinery, earth moving equipment, etc.

Unaffected by temperature, humidity, electricity—A feature of all Jones Tachometers is that they are unaffected by temperature, humidity, proximity to large electrical units or magnetic conditions. Also they operate in either direction of rotation and are accurate in any position, horizontal or vertical. They are furnished complete in carrying case with rubber tips and accessories. **Write for Bulletin 146-1 or a demonstration to:**

JONES MOTROLA CORPORATION
STAMFORD, CONNECTICUT *(Advt.)*

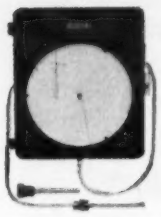
▲ For more details circle NED-635 J7 on enclosed inquiry slip ▲

PALMER TEMPERATURE INDICATING INSTRUMENTS

MERCURY ACTUATED

4½" DIAL THERMOMETERS

Made in 3 types to suit any requirements. Rigid stem, wall or flush mounted, 11 inches of scale reading. Interchangeable with standard industrial separable sockets. Stem can be placed at any angle and case can be rotated to any readable position.



RECORDING THERMOMETERS

Twelve inch die-cast aluminum case with black or white wrinkle or satin finish. Single or multiple pen construction. Electric or spring wound clock, 24 hour or 7 Day Revolution. Flexible Armor and bulb of stainless steel. Ranges—40+950°F. or Equivalent in °C.

INDUSTRIAL THERMOMETERS

Red-Reading Mercury—Extruded brass case — chrome finish. Ranges —40+950°F or Equivalent in °C.

RED-READING MERCURY LABORATORY THERMOMETERS

Thoroughly annealed for permanent accuracy. Complete line A. S. T. M. and fractional division types.

WRITE FOR CATALOG INFORMATION

PALMER THERMOMETERS, INC., Cincinnati 12, Ohio

▲ For more details circle NED-636 J7 on enclosed inquiry slip ▲

ONLY NEW HALLOWELL *ERECTOMATIC* STEEL SHELVING

has the unique built-in locking device which cuts assembly time, speeds repositioning of shelves

PLUS THESE FEATURES

- Straight-in, straight-out shelf change
- Independent shelf positioning
- Full use of shelf area
- Common side panels and posts
- Beaded posts and flanged shelves
- Full-depth shelf supports
- 4 classes of shelves

The unique built-in locking device,* developed by SPS for its new ERECTOMATIC® steel shelving, speeds assembly and rearrangement of shelves. To position a shelf—just slide it into place, press the locks, and the shelf is locked. To reposition a shelf—release the locks, pull the shelf straight out, slide it straight in at its new location, and press the locks. It takes only seconds to do the complete job. And shelves below and above, to left or right are undisturbed. For complete information, see your local Hallowell distributor. Or write Hallowell Shop Equipment Division, STANDARD PRESSED STEEL Co., Jenkintown 24, Pennsylvania.

*Patent applied for

STANDARD PRESSED STEEL CO.

HALLOWELL SHOP EQUIPMENT DIVISION SPS JENKINTOWN PENNSYLVANIA

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PHOTOCELL

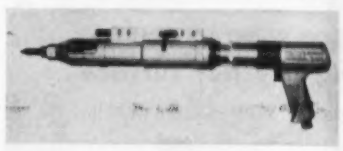
for various industrial relay uses

Extremely sensitive cadmium-sulfide photoconductive cell permits direct relay operation without the use of an amplifier in most industrial light-operated relay applications. The head-on type RCA-6957 cell is most sensitive to yellow-red light in the 5800-angstrom region, but has a spectral response range from 3300 to 7400 angstroms. Hermetically sealed cell is unaffected by high humidity. Maximum seated length is 1 11/16 in., total length is 2 7/32 in., and diameter is 1 9/32 in. Made by **Radio Corp. of America,** RCA Electron Tube Div., 33rd Floor, 744 Broad St., Newark 2, N. J.

▲ For more details circle NED-638 J7 on enclosed inquiry slip ▲

PNEUMATIC DRILL

for drilling, reaming hard metals

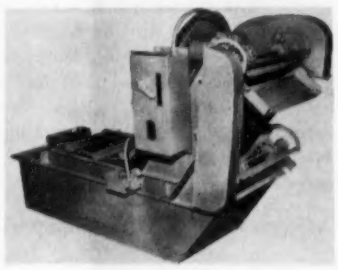


A 4-in. stroke and feed rates of 0.004, 0.006, 0.008 and 0.010-in. per revolution adapts the K-Matic air drill to drilling and reaming of hard metals. Positive feed, which avoids work hardening, is best utilized when drilling holes in large titanium and stainless steel aircraft parts. A 30-degree turn locks this portable, suspension-type tool in position to absorb both torque reaction and thrust of drilling. It develops up to 1000 lb of thrust. Drill can be used in automatic machining fixtures for progressive drilling, reaming and tapping. Made by **Gardner-Denver Co.,** 1350 Front St., Quincy, Ill.

▲ For more details circle NED-639 J7 on enclosed inquiry slip ▲

LIQUID FILTERING SYSTEM

in capacities from 20 to 1000 gpm



Flotation, progressive filtering and settling principles are embodied in this automatic, continuous and self-cleaning filtering system. The industrial unit features a horizontal self-cleaning slotted filter screen and is constructed with heavy-duty over-size drive chains, conveyor chains, gear box and sealed bearings. Screens can be changed in 5 minutes. Standard systems range in capacities from 20 to 1000 gpm with screen sizes from 0.004-in. and up. Made by **Henry Mfg. Co.,** Box 219, Bowling Green, O.

▲ For more details circle NED-640 J7 on enclosed inquiry slip ▲

why the swing is to TOLEDO PRODUCTION SEATING

Series 8150 Adjustable Posture Chair in use.

- **Increases production**
- **Lifts morale**
- **Reduces errors caused by fatigue**
- **Meets "use requirements" at each station**

The Toledo Metal Furniture Company offers you the only complete line of comfortable, safe, durable PRODUCTION SEATING. Choose from a wide range of features*, developed from Toledo's 60 years experience, to get exactly the right chairs for your operations.

***FEATURES . . .** HEIGHTS (10 basic heights, range: 14" to 32"): Quick-adjustable—Adjustable—Fixed. FEET: 5 kinds to choose. SEATS: Swivel—Non-swivel—Steel — Wood — Cushioned. BACKREST: Straight — Springback — Adjustable.

Series 146 Fixed Height Stool

Free! Valuable PRODUCTION SEATING information. Write for Bulletin 905-A.

Series 5306 Quick Adjustable Posture Chair

Other Series Available

The Toledo Metal Furniture Co.
1020 SOUTH HASTINGS STREET • TOLEDO 7, OHIO

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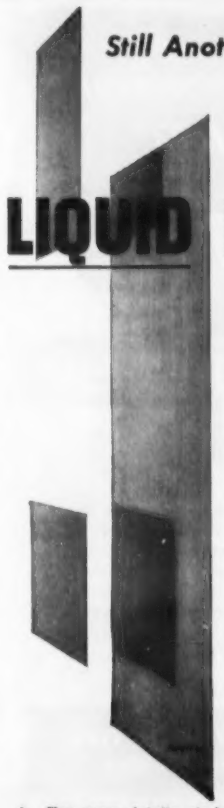
Still Another AMERICAN *First!*



WINDSOR FELTS FOR LIQUID FILTRATION

OUTLAST ALL OTHER FILTER MATERIALS 10 to 1

Windsor Felts are unique, fiber bonded, non-woven structures, engineered to serve as economical and efficient filter media for industrial processing. Quick facts:

- Greater product recovery
- Can be hosed off without taking from press
- Do not shrink, are ravel-free and produce clean-cut edges
- Easy cake release
- Can be re-used indefinitely
- Produce less plugging
- Reduce leakage
- Have unusual stability
- Temperatures to 250F

These outstanding properties make Windsor Felts highly suitable for use on plate and frame, pressure leaf, rotary vacuum, cartridge or specialty filters. Send today for Data Sheet #18—WINDSOR FELT-LIQUID FILTRATION, making request on your firm's letterhead.

American Felt Company
TRADE MARK

GENERAL OFFICES: 62 GLENVILLE ROAD GLENVILLE, CONN.

▲ For more details circle NED-642 J7 on enclosed inquiry slip ▲

waste motion costs you money... speed up production traffic

with R-W Aut-o-doR

INDUSTRIAL ELECTRIC OPERATORS

R-W offers a complete line of time-tested, heavy-duty Industrial Electric Operators designed to increase plant efficiency, employee comfort and safety, and eliminate heat loss in winter and conditioned air loss in the summer. R-W Electric Operators will help to speed-up plant traffic, smooth traffic flow and eliminate confusion. Smooth, automatic door operation assures fast, easy movement between departments, saves time involved in manual door operation and reduces time and cost involved in door and equipment maintenance. R-W Electric Operators open plant doors automatically as traffic approaches, hold the doors securely open, and then close the doors automatically, safely and smoothly. Eliminates door slamming and rough handling. For quick, low-cost installation, maximum performance and overall economy you can't buy a finer automatic door opener than an R-W "Aut-o-doR" Electric Operator.

Write today for your free copy of Catalog 200 . . . it will eliminate guesswork in selecting correct operators for specific installations.

Richards-Wilcox MANUFACTURING COMPANY ELECTRIC OPERATOR DIVISION

435 W. THIRD ST., AURORA, ILL. Branches in Principal Cities

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Popular cost-cutters on thousands of assembly lines . . . Tinnerman "U" and "J" Type SPEED NUTS! These versatile, spring steel fasteners snap into place by hand, are self-retained in screw-receiving position. They furnish secure, vibration-proof attachments, eliminating welding, clinching, staking, tapping of holes, costly threaded inserts. Available for a full range of screw sizes and panel thicknesses. Write for complete details.

TINNERMAN PRODUCTS, INC.
BOX 6688, DEPT. 12, CLEVELAND 1, OHIO

For more details circle NED-646 J7 on enclosed inquiry slip

ULTRASONIC CLEANER
washes, rinses, dries small parts

Almost any combination of solvents can be used in model WC-17 ultrasonic cleaner which washes, rinses, and dries a large variety of small, precision parts. Unit draws 1½ amp at 115-v 60-cycle single-phase current and delivers 25 w of R-F power at 1 megacycle. This provides suitable power for dispersing, degassing, agitating, chemical reaction study, and aging experiments. The high frequency removes contaminating particles down to a few microns in size. Unit has stainless steel lift-out cleaning chambers, parts holding baskets, and covers. Vibrating barium titanate crystals in the bottom of each transducer provide the ultrasonic energy. Made by **McKenna Laboratories,** Dept. WNE, 2503 Main St., Santa Monica, Calif.

For more details circle NED-649 J7 on enclosed inquiry slip

PHOTOMACROGRAPHIC CAMERA
for examining any flat surface

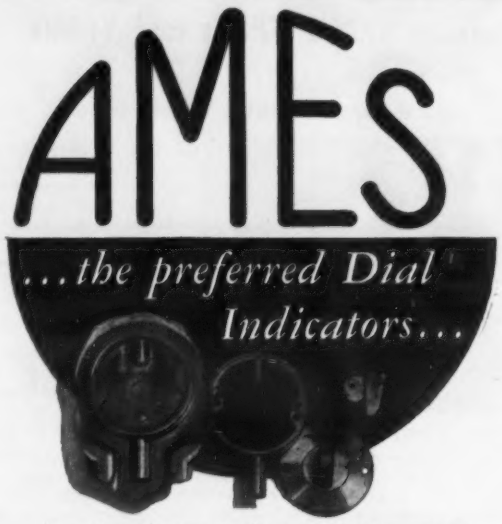
Examination of flat surfaces for quality control in graphic arts, ink, paint and varnish, textile, and other fields can be carried out with the photomacrographic camera. It has a coated, color corrected Raptar lens, and its 4 x 5-in. image produces a 23 X enlargement of a 3/16 x ¼-in. field. The portable camera can be used anywhere a 12 x 14-in. flat surface and 110 v are available. It is focused on the hood-darkened ground glass. Lens has settings from f1.9 to f221. Standard 4 x 5-in. cut black and white or color film is used. Polaroid or stereo pictures can also be taken. Camera can also be used for routine inspections by viewing the ground glass. Various accessories are offered. Made by **Erdco Engineering Corp.,** Dept. NED, Addison, Ill.

For more details circle NED-650 J7 on enclosed inquiry slip

Automatic Assembly Equipment

Dixon Automatic Tool, Inc.—Standardized automatic parts handling and assembling equipment that can be combined with existing equipment to automate small parts assembly operations is described in illustrated 4-page bulletin. Pieces from 1/16 to 3 in. are handled at up to 6000 per hour. Automatic driver for nuts and screws up to 5/16-in. thread size is also described.

For more details circle NED-651 J7 on enclosed inquiry slip



have forged cases, backs and wheel supports for maximum stability

The extreme care put into the design and material selection of component parts typifies the Ames approach to manufacturing a superlative product. It's just one of the reasons why so many quality control engineers specify Ames Dial Indicators as "preferred" Write today for complete information.

Representatives in principal cities

B.C. AMES CO.
34 Ames Street, Waltham 54, Mass.

MANUFACTURERS OF MICROMETER DIAL GAUGES • MICROMETER DIAL INDICATORS

For more details circle NED-653 J7 on enclosed inquiry slip

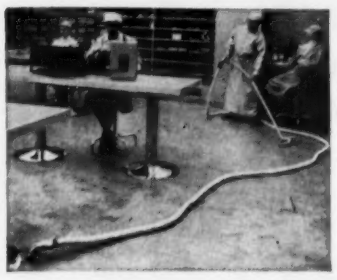
Light weight non-corrosive ALUMINUM GRATING

Unique "J" lock construction adds greater rigidity and longer life to Dravo's Aluminum Grating. Available in non-slip serrated or plain surfaces. Best for grating applications where light weight, corrosion resistant, spark proof construction is required.

For information, write Dravo Corporation, Dept. D-2509, Pittsburgh 22, Pa.

DRAVO CORPORATION

For more details circle NED-647 J7 on enclosed inquiry slip



THE FAFNIR BEARING CO.
NEW BRITAIN, CONN.

"Cleanest Rooms in the World"

are maintained by SPENCER Vacuum Cleaning System

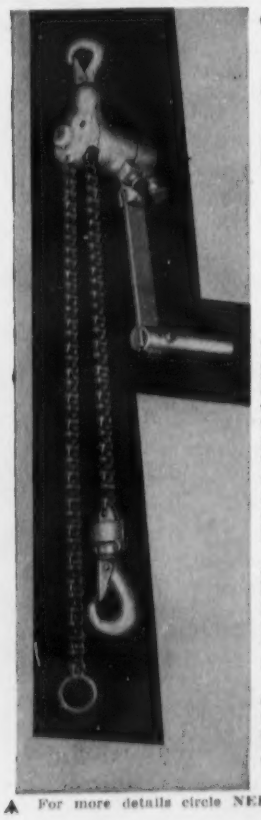
In areas where delicate instrument bearings are assembled and inspected at Fafnir, complete, dust-free sanitation is essential!

These vital areas, reputedly "the cleanest rooms in the world", are Spencer vacuum cleaned several times daily. A remotely located 5 HP Spencer stationary vacuum producer and dirt separator . . . with piping to flush-mounted inlet valves . . . permits easy, "plug-in" attachment of light-weight plastic hose . . . quick, convenient cleaning that's *complete* and *dust-free.*

Request Bulletin 1558 describing Spencer Vacuum.

The SPENCER TURBINE COMPANY
HARTFORD 6, CONNECTICUT

For more details circle NED-654 J7 on enclosed inquiry slip



The 9½ lb. Coffing Mighty Midget Puller

LIFTS 1000 POUNDS

Lightweight and compact Coffing Mighty Midget Pullers are handy lifting tools for all kinds of operations in plants and in the field. The 1000 lb. capacity models weigh but 9½ lbs., and will lift the full load with only 40 pounds of handle pull. The 500 lb. model weighs 6½ lbs., and 28 pounds of handle pull lifts the capacity load.

On both models the handle can be used as a crank for fast lifting, or as a lever for working in cramped quarters. Should the puller be overloaded, the "safety valve" handle will give before any load-bearing part fails.

For full information on these sturdy pullers, consult your distributor or write to us for Bulletin MP. *Coffing Hoist Division, Duff-Norton Company, 803 Walter Street, Danville, Illinois.*

For more details circle NED-648 J7 on enclosed inquiry slip

SAVINGS COME YOUR WAY with Clipper HOOKS and LACERS

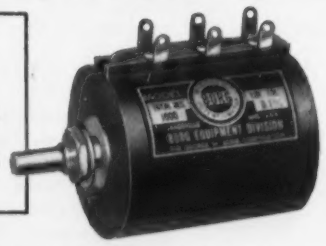
Wear on hooks, belts and machinery is minimized by durable, smooth, flexible Clipper machine-laced joints. Save maintenance costs and cut unproductive downtime. Use Clipper hooks and lacers. For more information, send for Bulletin No. 157.

Clipper BELT LACER COMPANY
976 Front Ave., N. W., Grand Rapids, Michigan
Ask your Industrial Distributor for Clipper Products

For more details circle NED-652 J7 on enclosed inquiry slip

NOW PRODUCE YOUR PRECISION PRODUCTS with a PRICE ADVANTAGE!

BORG 1100 Series Micropots



Accurate . . . Competitively Priced!

Gain both price and quality advantages in your competitive markets! Borg 1100 Series MICROPOTS give you quality potentiometers at competitive prices. This enables you to cut production costs of your precision instruments! Borg 1100 Series MICROPOTS have precision fabricated parts assuring permanent accuracy. Write today for the name of your nearest Borg Jobber or "Tech-Rep"!

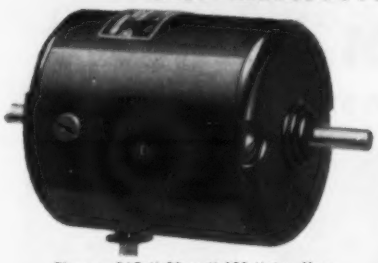
Write for Catalog BED-A56

BORG EQUIPMENT DIVISION
THE GEORGE W. BORG CORPORATION
JANESVILLE, WISCONSIN

MOTORS
MICROPOTS
MICRODIALS

For more details circle NED-655 J7 on enclosed inquiry slip

FHP motors . . . engineered especially for your product



The new RAE M-20 or M-100 Motor. Ventilated or enclosed. Designed for quality but not expensive. Strong, rugged casting. Ball or sleeve bearings. Can be used with any of RAE's gear units.
Winding —
M-20 — Universal or Shunt
M-100—Permanent Magnet (DC Shunt)
Voltage — 6 to 220 AC/DC or DC Shunt
Max. H. P. — 1/30 Continuous
Weight — Approx. 2 lbs.

RAE motors

RAE engineers are recognized specialists in solving difficult FHP motor applications. By careful analysis and testing of your product, they can save you time and money in selecting the right motor.

RAE offers outstanding service and quality in a large variety of motors. Available in voltages up to 250, and up to 1/6 H.P. (higher for intermittent duty) with many gearhead motor combinations.

Find out how RAE motors can *improve your product* and *reduce costs* as they are doing for other leading manufacturers.

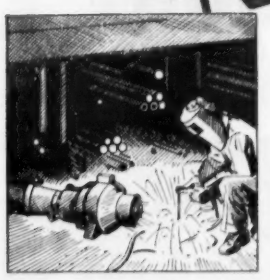
***Send for the "RAE" Engineering Data Sheet. It will help you supply the data necessary for recommendations and prices.**

Rae MOTOR CORP.
2009 Kewaunee Street
Racine, Wisconsin

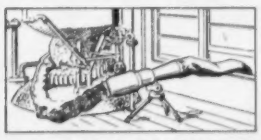
AC/DC Universal • DC Shunt Wound • DC Series Wound • Gear Reduction Motors • Governor Controlled Motors • Motors for Rheostat Control • Motors for Electronic Control • Permanent Magnet Motors and Gearmotors.

▲ For more details circle **NED-656 J7** on enclosed inquiry slip ▲

Ventilate CONFINED Places with Vano Design "C" Ventilator-Exhauster



WELDING FUMES are here removed by this Vano Ventilator-Exhauster.



FUMES FROM A REACTOR KETTLE are here withdrawn by tripod-mounted Vano Ventilator-Exhauster. Note non-collapsible suction tubing and discharge tubing.

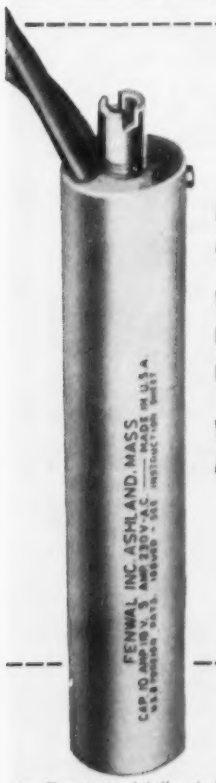
Ideal for withdrawing welding fumes from confined places or directly from the welding rod. Provides greater safety, greater comfort for workers . . . leads to greater work efficiency. Can be furnished with 8" suction inlet to which 8" non-collapsible suction tubing may be attached . . . or provided with multiple inlet nozzles for 5", 4" and 3" suction hose.

Other types are also available for supplying fresh air to men working in confined places, such as tanks, manholes, drums, boilers and shipholds.

For full details on Coppus Vano Design "C" Ventilator-Exhauster write COPPUS ENGINEERING CORPORATION, 100 Park Avenue, Worcester 2, Mass.

ANOTHER **COPPUS** "BLUE RIBBON" PRODUCT

▲ For more details circle **NED-657 J7** on enclosed inquiry slip ▲



HEAT-CONTROL PROBLEMS IN YOUR INDUSTRY, MR. DESIGNER?

BEST ANSWER USUALLY COMPACT, TOUGH, ACCURATE FENWALL THERMOSWITCH® UNIT.

WE HAVE PROVED THAT TO DESIGNERS IN ALMOST EVERY INDUSTRY, INCLUDING, PROBABLY, YOURS.

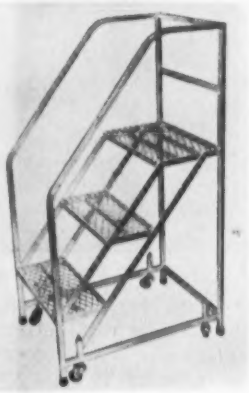
VERY ADAPTABLE—24,000 VARIATIONS AVAILABLE ON BASIC THERMOSWITCH IDEA.

Designers — Write Fenwal Inc., 89 Pleasant St., Ashland, Mass., for THERMOSWITCH Folder.

Fenwal
Controls Temperature . . . *Precisely*

▲ For more details circle **NED-658 J7** on enclosed inquiry slip ▲

LADDER-STANDS
30 models have up to eight steps



Welded ¾-in. square steel tubing with a rust resistant finish is used in Alco-Lite steel ladder-stands, available in 30 models with up to eight steps. Reinforced expanded steel steps provide slip resistance. Ball bearing casters retract and force rubber tipped feet against the floor when user's weight is applied to steps. Made by **Aluminum Ladder Co.**, Dept. 5N, Worthington, Pa.

▲ For more details circle **NED-659 J7** on enclosed inquiry slip ▲

SPRING STEEL CLIP
secures control knobs to shafts

This spring steel Speed Clip is designed to secure radio and TV control knobs to tuning shafts. Clip is inserted into the knob recess with only slight compression. On release the fastener centers itself and locks firmly in place. Knob with assembled clip is then thrust over D-shaped shaft where it is held firmly under live spring tension. Made by **Tinnerman Products, Inc.**, Dept. 14, Box 6688, Cleveland 1, O.

▲ For more details circle **NED-660 J7** on enclosed inquiry slip ▲

MAGNETIC BELT CONVEYOR
moves loads at 90-degree angle

Steel tote boxes and ferrous parts or products, either unpackaged or in paperboard containers, can be transported at up to 90-degree angles by the A-F magnetic belt conveyor. Loads are carried on a thin rough-surface belt which slides over a metal bed containing permanent Alnico magnets. Like poles of all magnets are connected with metal strips. Magnetic attraction of these continuous metal strips holds load securely to belt. Special drive, consisting of right angle gearhead motor with a roller chain drive to conveyor headshaft, keeps belt slack enough to conform to lower vertical curve. Made by **Alvey-Ferguson Co.**, Dept. NE, 1765 Disney St., Cincinnati 9, O.

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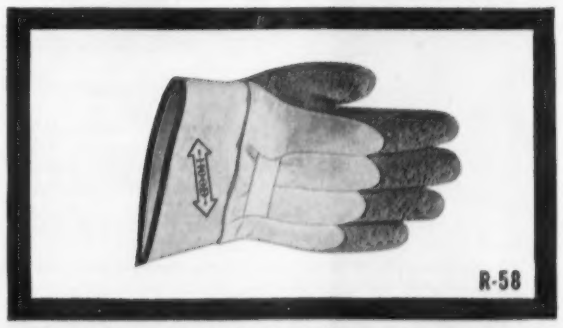
For a grip that's sure! the new HOOD "Grip-all" GLOVE



For workmen who handle sharp, slippery objects such as glass, sheet metal, etc. Extra-coarse rubber dust coating provides an effective anti-slip surface. "Grip-all"'s are flexible, too . . . with "free-action" fingers.

Five different styles include palm- and fully-coated styles with knit wrists and 2" and 4" safety cuffs.

Write for free Hood Glove Guide—shows you how to choose the RIGHT glove for EACH job.

HOOD RUBBER CO.,
a division of the B. F. Goodrich Company
WATERTOWN, MASS.

RUBBER • NEOPRENE • PLASTIC COATED INDUSTRIAL GLOVES

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New! DPS CONNECTORS for High Altitudes-Vibration

DPS Rack/Panel pressurized connectors are designed for high altitude and vibration applications. When mated, the connector is sealed about the insert faces by a specially designed rubber seal, which allows an axial tolerance of up to ⅛" while still effecting a seal. In addition, tightening of the junction shell effects a compression seal around the wires that have been inserted. Available in 4 different sizes, in a variety of insert arrangements. Contacts must be ordered separately, and installed at time of wiring. Co-axial contacts, thermocouple contacts, air lines available.

Write for Bulletin DP-101 TODAY! / Please Refer to Dept. 113

CANNON PLUGS
CANNON ELECTRIC CO., 3208 Humboldt St., Los Angeles 31, California

▲ For more details circle **NED-663 J7** on enclosed inquiry slip ▲

Foster's AUTOMATIC Quick Detachable Coupler

CUTS YOUR COUPLER COSTS ON HEAVY DUTY WORK

for OIL, AIR and GREASE

Smaller and Lighter Than Most Light-Duty "ball-type" Couplers

THE FOSTERMATIC "BULLDOG" GRIP
"Dogs" are contoured to grip 41% of plug locking surface.

"Dogs" instead of "balls" lock steel against steel . . . hold tighter, without leakage . . . positioned by "floating steel carrier" which absorbs vibration of pulsating air. Chrome sleeve is of stress-proof, heat treated steel to withstand roughest treatment. The Fostermatic is right for 90% of all uses.

Send for New Catalog Data Book #110—No Obligation!

FOSTER MFG. CO., INC.
2850 Gravois, Dept. 2-C St. Louis 18, Mo.

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HARDINGE ELMIRA, N.Y. Style "S" SURE-GRIP
Draw-In Master Collets and Pads

Your automatics will perform best when using HARDINGE Master Collets . . . with no work pressure on the screw.

Available in all sizes up to 3½" capacity for the following machines:

CLEVELAND
CONE
GREENLEE
GRIDLEY and ACME-GRIDLEY
NATIONAL ACME
NEW BRITAIN
WARNER & SWASEY

Pads changed quickly without removing master collet from spindle . . . interchangeable among different machines of the same capacity.

Write for Style "S" Bulletin which gives all performance features, price savings, and ordering information.

SPECIFY HARDINGE COLLETS For all Lathes and Automatics
Over 65 Years of Manufacturing Experience

HARDINGE BROTHERS, INC., ELMIRA, N. Y.

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for as little as $22.00 COMPLETE IN U.S.A.

for this production boosting

'TRICO-MIST' COOLANT SYSTEM

For drilling, tapping, milling, sawing, grinding, etc. Removes heat from cutting edges of tools and work. Feeds can be increased considerably, finer finishes and accuracy are obtained. TRICO-MIST absorbs heat, thereby quenching it faster than flood coolants which only transfer it. Chips slide freely up the tool face and are blown away automatically.

Simple needle valve controls size and volume of mist spray. Attaches to shop air line. Available with one and five gallon containers—single or multiple outlets—single or dual valve control.

GET FACTS

SEND FOR BUL. 37-A

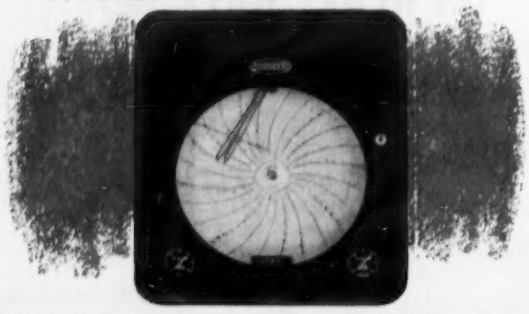
TRICO FUSE MFG. CO. MILWAUKEE, WIS.

For more details circle NED-666 J7 on enclosed inquiry slip

Advanced Design

PNEUMATIC CONTROLLERS

...Masonellan 60000 Series



Special gimbal design provides exceptional versatility. Four combinations of primary and feedback motion. Three control types in one instrument: On-Off, Proportional and Differential Gap — each with direct or reverse action. Simple individual and interchangeable subassemblies; plug-in connections for pneumatic units.

Use this 60,000 Series as basic instrument for process control: unsurpassed accuracy for measurement and pneumatic control of pressure, temperature, flow, liquid level and related variables.

SEND FOR TECHNICAL BULLETIN . . . complete facts and specifications for easy selection.

MASON-NEILAN

Division of Worthington Corporation

69 Nahatan Street, Norwood, Massachusetts

A complete line of Control Valves, Control Instruments, Regulators, Liquid Level Controllers and Special Process Control Equipment.

For more details circle NED-667 J7 on enclosed inquiry slip

For more details circle NED-668 J7 on enclosed inquiry slip

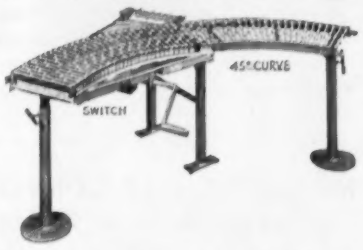
TANK COVER GUARD
promotes safe, clean liquid handling

Safe, clean and efficient filling or removing of liquids from tank cars and containers is made possible with use of the Saf-T-Kone coated-fabric cover. The Saf-T-Kone minimizes danger from fire, flash, sparks, fumes, splash and spillage and reduces evaporation loss when handling bulk liquids. The guard has a weighted bottom, a steel ring which holds its shape and a draw cord for fastening to pipe outlet. It is made in 19 and 22-in. sizes in fire and weather-resistant vinyl coated fabric for handling petroleum and in heavy canvas, double coated with acid-resistant finish, for handling acids and chemicals. Made by **Frommelt Industries,** Dept. S. A., Box 419, Dubuque, Iowa.

For more details circle NED-669 J7 on enclosed inquiry slip

MIDGET CONVEYOR SWITCH
made in wheel or roller type

Midget version of the gravity conveyor Flex-A-Switch for use with the Mighty Midget conveyor is available in either wheel or roller types. It can be used in many combinations with curves and straight sections to distribute work in production, feed small parts to assembly or inspection stations, gather and assemble orders, and distribute finished work for stock piling. It can be adjusted from through travel to 45 degrees, right or left. Guide rails are unnecessary because axle centers are always on radial lines. Wheels and rollers are ¾-in. in diameter and can be as close as 0.857-in. center to center. Articles down to 1½ in. long can thus be handled. In addition to manual control, either air or electric automatic control, remote or station operated, can be supplied. Made by **Metzgar Conveyor Co.,** Dept. NED, 416 Douglas St. N. W., Grand Rapids 4, Mich.



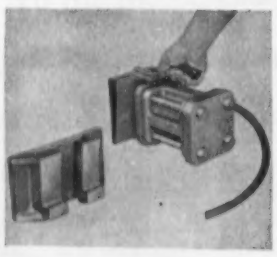
For more details circle NED-670 J7 on enclosed inquiry slip

Printed Circuits

"Introduction to Printed Circuits" by Robert L. Swiggett, covers the processes used in making ceramic based, etched, plated, stamped, pressed powder, embossed wiring, double foil and die-blanked printed circuits. Also covered are servicing techniques, components and types of assembly systems. Price is $2.70. Available from John F. Rider Publisher, Inc., 480 Canal St., New York 13, N. Y.

For more details circle NED-671 J7 on enclosed inquiry slip

CLEVELAND'S NEW PORTABLE VIBRATOR



Lightweight

Well-Balanced

Having trouble with materials sticking in your portable bins or trucks? If so the Cleveland Type LSRRH Portable Vibrator is just what you've been looking for. This lightweight, unusually well-balanced portable is ideal for all equipment such as concrete forms, septic tanks or large pipe forms, that do not require a permanent vibrator installation.

The Cleveland Type LSRRH Portable Vibrator will develop 7000 to 8000 vibrations per minute at maximum speed, maintaining a free flow under all conditions. Its sturdy cast steel bracket holds the LSRRH securely in place, making it ideal for heavy duty use.

For more detailed information write for our illustrated catalog.

Remember, this new portable vibrator is just one of The Cleveland Vibrator Company's complete line of air and electric vibrators. There's a type and size vibrator for your every requirement.

THE CLEVELAND VIBRATOR CO.

2744 Clinton Avenue • Cleveland 13, Ohio

For more details circle NED-672 J7 on enclosed inquiry slip

New Bulletin on

WORM GEARING

for designers and engineers

Yours for the asking Bulletin 145

Bring your file up to date with this new, complete bulletin on Cleveland worm gear drives. Shows all standard units, with engineering data. Also tells how to plan and order special designs.

THE CLEVELAND WORM & GEAR COMPANY

3283 East 80th Street • Cleveland 4, Ohio

Sales Representatives in all major industrial markets

CLEVELAND Worm Gear Speed Reducers

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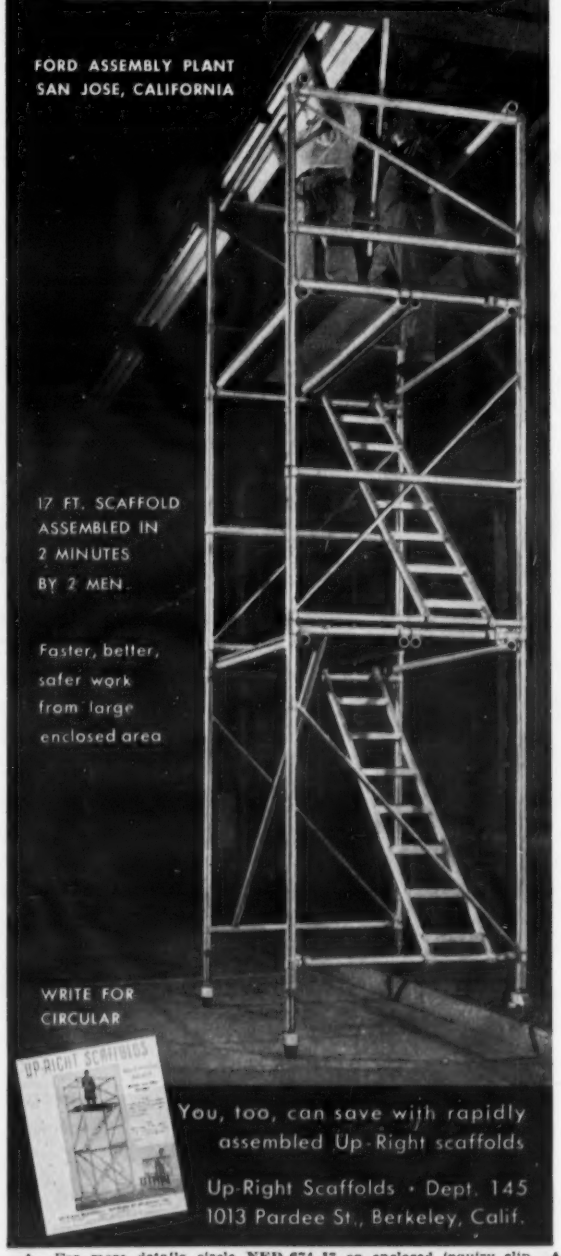
PLANT SAVES ON 45 ACRES OF OVERHEAD WORK WITH

UP-RIGHT aluminum SCAFFOLD-ON-WHEELS



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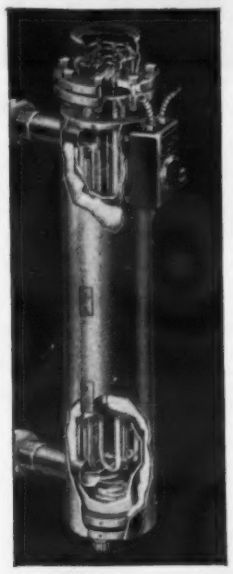
Convert to CHROMALOX® ELECTRIC Circulation Heaters with new higher ratings



• fast • automatic • economical

For controlled heating of water, oil, heat transfer media, steam, air and other gases.

Low cost installation and maintenance.

Automatic thermostatic control—set it and forget it . . .

No flame, flues, fumes. No smoke. No soot.

Compact, completely packaged. Built-in heating elements, heating chamber, thermostat and insulation. All you need do is connect 2 pipes, 2 wires.

Free Bulletin

Get the full story. Call your Chromalox Representative or write us today for Bulletin 701.

See other ad on page 4

Edwin L. Wiegand Company
7509 Thomas Boulevard • Pittsburgh 8, Pa.

C-2116

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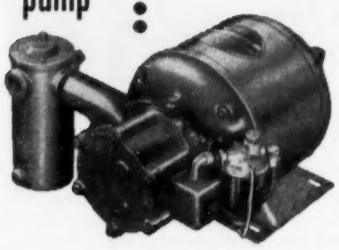
NEED VACUUM?

use the COMPACT pump

The Motoair Pump is built integral with its own motor to take the least amount of space and to avoid extra assembly necessary with separate drive.

Automatic lubrication complete with re-circulating system and visible oil reservoir is a feature of



the MOTOAIR®

Instantaneous suction and positive action is provided with the Motoair, being directly driven at the same rpm. as the motor.

ASK FOR CATALOG with performance data on various sizes of pumps Oil-less models also available.

824

NEW JERSEY MACHINE Corporation

FACTORY SALES AND SERVICE BRANCHES
CHICAGO CINCINNATI LOS ANGELES

1550 WILLOW AVENUE, HOBOKEN N. J.

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CONSULT THE NEW Abart CATALOG

FOR THE BEST SELECTION OF SPEED REDUCERS

• Data-Packed
• Pocket Size

REQUEST YOUR FREE COPY OF THIS VALUABLE CATALOG TODAY

The new Abart Catalog offers 92-pages of valuable information, engineering data, detailed drawings and photos. Here is a handy and accurate means of selecting the *exact* Abart Speed Reducer or Precision-Cut Gear for any application—fast, easy to use.

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GEARS—Custom-made from any gear material to your exact requirements—NO STOCKS. Pitches from 96 D.P. to 5.7 D.P. Request Gear Bulletin.

Send B/P and Specs or Sample for Prompt Quotation

ABART GEAR and MACHINE CO.
Mfrs. of Gears and Speed Reducers

4831 WEST 16th STREET • CHICAGO 50, ILLINOIS

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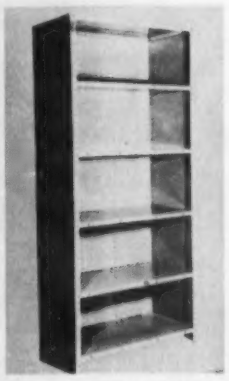
STEEL SHELVING for changing storage conditions



Built 84 in. high to conserve floor space, Frontier steel shelving units are available in open or closed styles. They double-rack, attach in long rows or operate individually, and can be moved from one location to another. They are 36 in. wide and 12, 18 or 24 in. deep, with special sizes also available. Shelves adjust quickly on 1½-in. centers, and can be added or removed to accommodate changing storage conditions. Made by **Frontier Mfg. Co.**, Dept. NED, 11200 Harry Hines Blvd., Dallas, Tex.

▲ For more details circle NED-678 J7 on enclosed inquiry slip ▲

SAFETY CLOTHING protect against ultraviolet rays

Black Beauty line of lightweight safety clothing, made of soft, pliable, tanned, split cowhide, is finished in a dull black color to provide protection against ultraviolet rays from welding operations. Garments include cape sleeves, jackets, bib aprons, leg aprons and sleeves. Also available is line of welders' gloves of the same material. Made by **Singer Glove Mfg. Co.**, Dept. NE, 860 W. Weed St., Chicago 22, Ill.

▲ For more details circle NED-679 J7 on enclosed inquiry slip ▲

FLEXIBLE SHAFTS for remote control and power drives

Six different models, all with standard 3-ft shafts, in line of flexible shafts adapt them for design, experimental and prototype work in power drive, remote control or internal coupling applications. Female couplings permit attachment to equipment and conversion for a wide range of uses. Three remote control units have 0.15 to 0.375-in. shafts, 1-6 to 50 lb-in. torque ratings, and are adaptable for manual or low speed applications. Three power drive units with same shaft sizes have up to 50 lb-in. torque ratings at 20-in. radius and are suitable for 7000 rpm service in smallest to 5000 rpm in largest. Made by **S. S. White Dental Mfg. Co.**, Industrial Div., Dept. 30, 10 E. 40th St., New York 16, N. Y.

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STOP PIPE JOINT LEAKS with Gasoila-Amazing JOINT & SEALING COMPOUND

Stop those leaks instantly, permanently, safely, economically! Gasoila does a perfect job . . . seals threaded connections, face joints, seams, gaskets. Over 40 years of wonderful results — no failures! Used everywhere . . . petroleum refining, pipe lines, tanks, aircraft, automotive, refrigeration, air conditioning, oil burners, ships, boats, etc., etc.

STAYS ELASTIC • Easy to apply • Makes positive joint — but easy to take apart • Prevents corrosion • Withstands vibration • Write for FREE BULLETIN, or ask for Small Sample

Insoluble in Gasoline, Oil, Water, Freon, Butane, etc. Underwriters Lab. Approved

FEDERAL PROCESS CO.
1120-A Citizens Bldg. • Cleveland 14, Ohio

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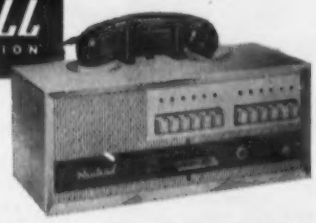
take the "TURTLE PACE" out of your business with

ELECTRONIC AMPLICALL INTERCOMMUNICATION

featuring new light and chime signals



the "clear line" to everyone in your business

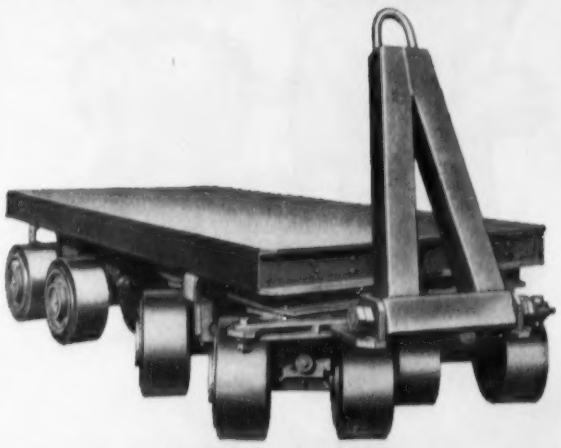
SAVES TIME • CUTS COSTS • Speed up your business pace with this time-saving "clear line" internal communication system. Have *2-second speech contact* within and between all departments—get information, issue instructions, hold conferences, speed action throughout your business—at the touch of a button. AMPLICALL takes the load off busy switchboards, puts an end to wasteful walking and waiting—pays for itself in speedier, more efficient operations. Models now available with new light and chime signals. There is an AMPLICALL system for your exact needs. Write for complete facts today.

See your Classified Phone Book under "Intercommunication" for the nearest AMPLICALL specialist—or mail coupon today for full details.

RAULAND-BORG CORPORATION
3515-D Addison St., Chicago 18, Ill.

▲ For more details circle NED-682 J7 on enclosed inquiry slip ▲

Handle heavy loads safely



Phillips Heavy Duty Trailers

Phillips heavy-duty trailers are designed to safely and economically haul hot metal, ingots, slabs, plate, coils, bar stock, pipe, scrap and other products requiring in-plant handling.

Built in load-handling capacities from 6000 to 250,000 lbs., the Phillips trailers feature such advantages as front or front and rear axle fifth wheels for better steering, articulated axles, synchronized steering, Timken wheel bearings, solid or pneumatic tires, and 4, 8, or 16-wheel models.

They can be used singly or in tandem, the length of trains being limited only by the tow tractor. For good load stability, good roadability, safety, peak operating performance, and low initial cost with a minimum of maintenance, specify Phillips trailers.

SALEM-BROSIUS, INC.
16 Arch Street • Carnegie, Pa.

PHILLIPS MATERIALS-HANDLING EQUIPMENT

Manufacturers Since 1863

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WOODEN
SHELLS • ROLLS • CORES

TEXTILE • RUBBER • PAPER • PLASTIC
and other industries

• The CAP WELD SHELL shown above is designed for heavy duty rolling and offers the maximum in long-life service.

OPTIONAL TYPES
• CAP WELD SHELLS
• MACHINE ROLLS
• LAG ROLLS
• CAPPED END SHELLS
• CAPPED SQUARE SHELLS

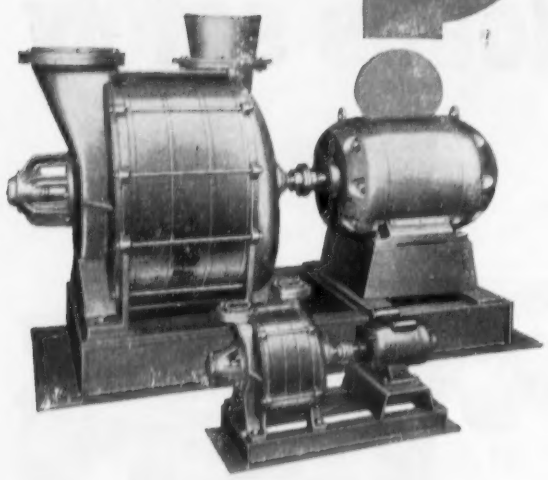
These cylinders are all available in standard diameters or can be supplied on order to meet your individual specifications.

CYLINDER MFG. CO.
HAWTHORNE, N. J.
ESTABLISHED 1916

Send for descriptive Brochure

For more details circle NED-684 J7 on enclosed inquiry slip

need a low-cost supplementary air supply ?



Before you buy additional high-cost, high-pressure equipment
If your present high-pressure supply is overtaxed
Even if your supply is not overloaded

SURVEY YOUR PRESENT—AND FUTURE—USES OF AIR!

You will save your company money . . . production headaches . . . add extra measures of efficiency to every installation, by investigating the proved economies of *low-maintenance, low-cost* Lamson Billmyre Centrifugal Blowers and Exhausters.

From 100 to 25,000 C.F.M., from ½ to 500 H.P., in single or multi-stage design, Lamson Blowers and Exhausters deliver the right amount of clean, dry air or gas—without pulsation. Pressure or vacuum always remains nearly constant at all capacities . . . with H.P. proportional to actual volume delivered. Shipments are rapid . . . installation is on-the-spot.

And remember, Lamson Blowers and Exhausters are backed by over 50 years of sound, practical engineering, time-proved design and skilled workmanship.

FREE LITERATURE!
Write for your copy of Bulletin B-7 describing the advantages of Lamson Billmyre Blowers and Exhausters

LAMSON

LAMSON CORPORATION
175 Lamson St., Syracuse 1, N. Y.
Plants in Syracuse and San Francisco
Offices in Principal Cities

For more details circle NED-685 J7 on enclosed inquiry slip

AUTOMATIC ELECTRIC STAIRWAY
powered by 1/3 or ½-hp motor

Operating entirely on lifetime sealed ball bearings, this automatic electric stairway is powered by ⅓ or ½-hp, 115-v 60-cycle single-phase gear motor. The ¼-in. steel cables and dual pulley assure stairway stopping in either up or down position at exactly the right place. Stairs, measuring 21¼ x 8 x 1 in., are covered with ribbed rubber tread. Large stringers are made of 1⅛ x 5½ in. stress-tested lumber. Sweeping hand rails are 1 1/16-in. OD galvanized steel tubing. They operate on twin sealed ball bearing rollers on both sides, as stationary guides to assure stairway performance. Stairway is made for 7½ to 12-ft ceilings and requires a 30 x 72-in. rough opening. Made by **Precision Parts Corp.**, 400-NED N. First St., Nashville 7, Tenn.

For more details circle NED-686 J7 on enclosed inquiry slip

MOVABLE LAMP
usable on bench, machine or wall

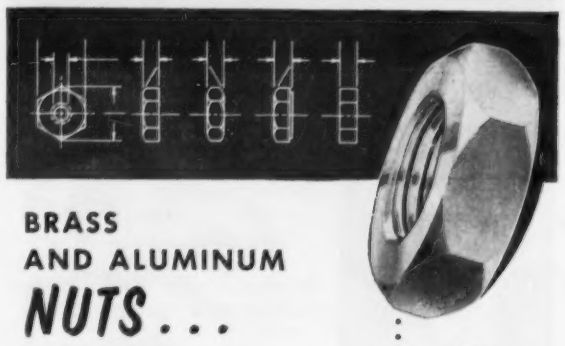
Quick-coupler mechanism built into the base of the Multi-Lamp locks the light on a small mounting bracket installed wherever light is frequently needed. It can be used with any number of brackets installed at various points, such as on a machine, work bench, electrical panel or under a truck hood on a special radiator cap. Lamp has a cool shade, industrial type switch, polyvinyl plastic protected arm, recessed bulb mounting to eliminate glare and a 360-degree ball bearing swivel base. It is offered with 18 or 24-in. long arms and two or three-conductor cords. Made by **Moffatt Products, Inc.**, 4826 Triton Dr., Minneapolis 22, Minn.

For more details circle NED-687 J7 on enclosed inquiry slip

Industrial Ovens & Dryers

Young Brothers Co.—16-page illustrated bulletin 157 describes a complete line of industrial ovens for baking, drying, curing and heat treating. Types covered include batch, conveyor and special models. Also detailed are various air recirculating systems, heating systems, and control and safety equipment.

For more details circle NED-688 J7 on enclosed inquiry slip



BRASS
AND ALUMINUM
NUTS . . .
TO YOUR
SPECIFICATIONS

Produced by turning, rather than by less accurate methods, Fischer brass and aluminum nuts set new standards of precision that will speed your assembly operations . . . cut costs. *Yet you pay no more for Fischer's extra quality!* Before placing your next order for special or odd size nuts, send specifications to Fischer for price and delivery quotations.

Write today for Catalog No. 55

Fischer
SPECIAL MFG. CO.
461 Morgan Street, Cincinnati 6, Ohio

C-907-FS

For more details circle NED-690 J7 on enclosed inquiry slip

M&M AIR FLUFF PAPER SHREDDER

101

A valuable machine, to you, for the speedy, safe, efficient disposition of blueprints, letters, confidential records. The M & M Air Fluff Paper Shredder is also a money saver to those companies that use quantities of paper excelsior—by converting waste paper into valuable excelsior. Adjustable cuts of ⅛", 3/16", ¼", or ⅜" widths. Models range in productive capacities from 200 to 2500 pounds per hour. Write for descriptive folder.

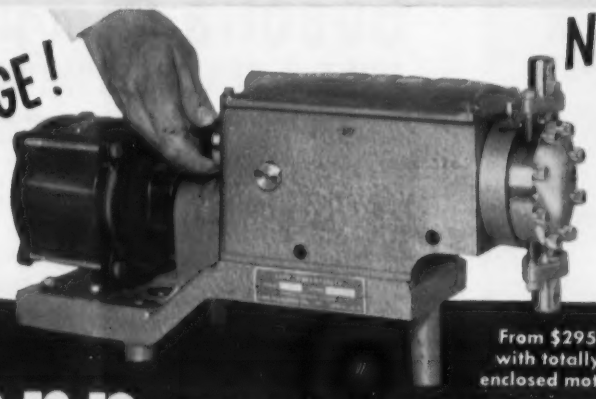
MITTS & MERRILL
1000 SO. WATER ST. • SAGINAW, MICHIGAN

For more details circle NED-691 J7 on enclosed inquiry slip

Lapp "MICROFLO" PULSAFEEDER
Pumps problem liquids at micro-flow rates

Now, for laboratory, pilot plant or industrial application . . . a controlled-volume chemical pump that's adjustable while idle or operating. All liquid handling parts of corrosion resistant materials . . . no stuffing box or other leak-likely seal. Other models for higher flow, higher pressures.
Model LS-10, capacity 2300 ML per hr. at 1000 psig.
Model LS-20, capacity 1040 ML per hr. at 2000 psig.

NO LEAKAGE!



NO STUFFING BOX!

From $295 with totally enclosed motor

WRITE *for Bulletin 500 which gives complete specifications. Lapp Insulator Co., Inc., Process Equipment Div., 849 Poplar St., LeRoy, N. Y.*

Lapp PULSAFEEDER
CONTROLLED-VOLUME CHEMICAL PUMP

For more details circle NED-689 J7 on enclosed inquiry slip

FOR EVERY PLANT AND OFFICE

DAV-SON

Genuine SELF-SEALING CORK-BACKED

BULLETIN BOARDS

INDOOR and OUTDOOR Styles.

Over 100 Types and Sizes to Choose from!

NEAT! HANDY! MODERN!

IMPROVE employee communications and morale by displaying announcements, bulletins, local news, production reports, etc., this modern, convenient way. Insist on DAV-SON *self-sealing* Cork Back—holds better, lasts longer. Available with hardwood or metal frame, locking glass door, fluorescent light, many other quality features.

DAV-SON "SAFETY DIRECTOR"
Flashing Display Board

Proved safety builder *compels* attention with red and green flasher lights. Exclusive Dav-Son *changeable-letter* removable panel permits quick, easy message change. Size 18½" x 29", 110-120 v. AC-DC.

NOTICE
ALL PERSONS ENTERING IN THIS OPERATION MUST WEAR GOGGLES

STOCK METAL WARNING SIGNS

Colorful, long-wearing baked enamel on metal, 10" x 14". Over 300 titles in stock—IMMEDIATE DELIVERY!

WRITE TODAY for big free Catalog! Dealer Inquiries Invited.

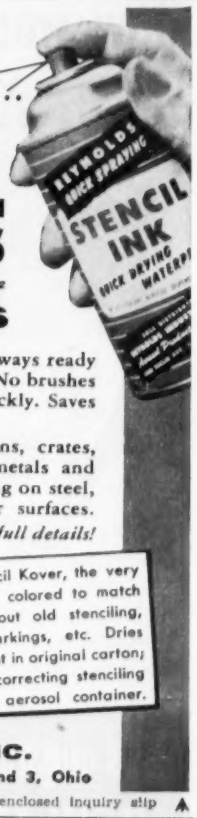
DAV-SON A. C. DAVENPORT & SON, INC.

Now in Our 25th Year of Quality Service

Dept. NE 311 N. DESPLAINES ST. • CHICAGO 6, ILL.

For more details circle NED-692 J7 on enclosed inquiry slip

Cut costs—Eliminate messy, sticky, leaky, ball pots, fountain brushes and rollers...



SPRAY YOUR STENCILS WITH REYNOLDS QUICK DRYING, WATERPROOF STENCIL INKS

Handy aerosol spray container is always ready to use. Nothing to load. No spilling. No brushes to clean. No drying out. Covers quickly. Saves time. Very economical.

9 COLORS. For stenciling cartons, crates, boxes, steel drums, color coding metals and other materials, or any other stenciling on steel, wood, fiber, canvas, glass or other surfaces.

A trial will convince you. *Write for full details!*

Ask us also about Reynolds Stencil Kover, the very opaque, fast covering blockout fluid. Tan colored to match corrugated cartons. Completely blocks out old stenciling, labels, printing, crayon or painted markings, etc. Dries quickly. Permits re-marking and re-shipment in original carton; —re-stenciling of left over cartons;—or correcting stenciling errors. Packaged in a handy 12 oz. aerosol container.

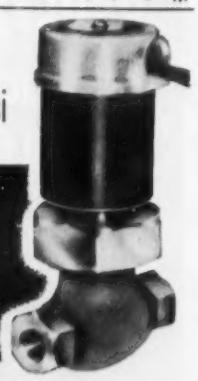
REYNOLDS INK, INC.

4504 Euclid Avenue • Cleveland 3, Ohio

For more details circle NED-693 J7 on enclosed inquiry slip

for highly corrosive fluids at pressures to 3000 psi

specify



Atkomatic STAINLESS STEEL solenoid valves

features include:

- Packless, globe type, two-way, pilot-piston operation
- Full ported design—½", ¾", 1", 1½" sizes.
- 316 stainless steel construction for maximum corrosion resistance.
- Resilient valve seats for bubble-tight, leak-proof seal.
- Instantaneous or delayed closing speed as desired.
- Single-wound "high pull" coil for pressures to 1500 psi; pressures to 3000 psi require double wound coil and relay.

Highly corrosive liquids and gases plus air, water and oil can be controlled safely and surely even at 3000 psi with Atkomatic Stainless Steel Solenoid Valves.

Solve your flow control problems Atkomatic-ly! Send for free 20-page Catalog No. 200-A.

Atkomatic VALVE CO., INC.

Dept. 4-J, 545 W. Abbott St., Indianapolis, Indiana

For more details circle NED-694 J7 on enclosed inquiry slip

SENSING HEADS
help position photoelectric pickups

Positioning of photoelectric pickups at points difficult to reach is simplified by these photoelectric sensing heads with light-conducting Lucite probes. The probes are rigidly attached in proper alignment to a case containing both phototube and light source. They are available in lengths up to 4 ft and in practically any shape. Photo shows a bin level control arrangement. Phototube and light source can be housed separately and probes projected into the pickup area from different directions. Heads are offered with either dark-energized or light-energized controls. Made by **Autotron, Inc.**, Box 722-D, Danville, Ill.

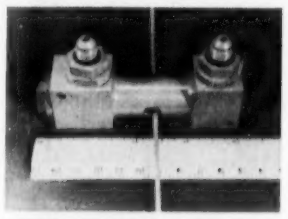
For more details circle NED-695 J7 on enclosed inquiry slip

MOBILE DISPLAY ROOM
trailer has electric brakes

Suited for product display at outdoor shows and conventions, this display room on wheels is a rigid 7½ x 16-ft building built of tongue-and-groove lumber, and mounted on a heavy duty steel undercarriage. Trailer has tires and driver-controlled electric brakes. The 120-sq ft building is complete with sash, door, hardware and prime coated exterior. It is demountable from undercarriage, or available without undercarriage, but including floor. Price is $795. Made by **Economy Buildings Inc.**, West Chicago, Ill.

For more details circle NED-696 J7 on enclosed inquiry slip

CABLE CUTTER
operated by explosive cartridges



Any system requiring instant, reliable cutting of cables, wires, tubes or rods can make use of this ballistically-operated cable cutter. Triggered by low incoming gas pressure, unit contains two independently fired cartridges, either of which produces sufficient force to sever a ⅛-in. steel cable. Other models are designed to operate from mechanical or electrical signals. Cutter was originally developed for ejection seat use in the F-104 jet aircraft. It weighs 0.45-lb and measures 4 x 2¼ x 1 in. overall. Made by **Stanley Aviation Corp.**, Dept. 1-A, 2501 Dallas St., Denver, Colo.

For more details circle NED-697 J7 on enclosed inquiry slip

Add mobility and efficiency to your equipment ...put it on Bond® CASTERS

Today users want equipment that *can be moved easily.* And Bond Industrial Casters do this best because they are soundly designed, made to the highest quality standards, best of all, priced to save you money. Why be satisfied with anything less—put your equipment on Bond Casters and be sure.

Write for your copy of Bond Catalog K-40—it's sixty-eight pages of solid facts—or see your local industrial distributor now.

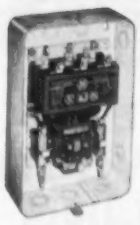
40-A Series Double Ball Race Structural Steel Swivel Caster

50-A Series Pressed Steel Swivel Caster

Bond FOUNDRY & MACHINE COMPANY

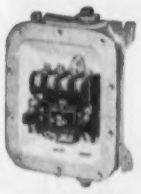
MANHEIM, PENNSYLVANIA

For more details circle NED-698 J7 on enclosed inquiry slip



A-B Quality

The Sign of QUALITY MOTOR CONTROL



SOLENOID MOTOR STARTERS that need NO Maintenance

The Bulletin 709 is a rugged, across-the-line solenoid starter. Simple design—only ONE moving part and double break, silver alloy contacts—assures millions of trouble free operations. No gimmicks to stick or corrode ... no contact cleaning required. Install an Allen-Bradley starter ... and you can forget it.

Do you have the latest A-B Handy Catalog—that abbreviated encyclopedia on relays, motor controls, enclosures, and accessories? If not, write today.

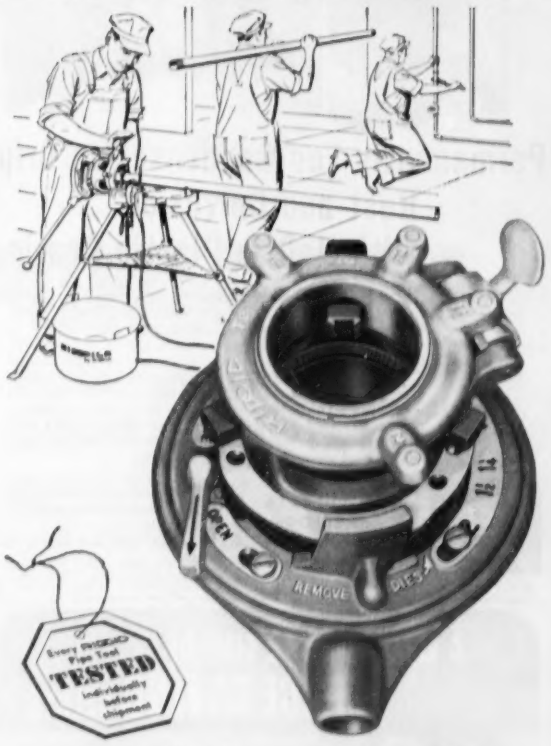
Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wis.
In Canada—Allen-Bradley Canada, Ltd., Galt, Ont.

ALLEN-BRADLEY SOLENOID MOTOR CONTROL QUALITY

For more details circle NED-699 J7 on enclosed inquiry slip

RIDGID

Jam-proof 65R Now Guarantees Straight Threads Every Time



...Revolutionary New TC (True-Centering) Workholder centers all pipe, even over or under size

No more crooked threads! 65R pre-sets to size by turn of TC Workholder gauge ring —tightens by palm-of-hand push on forged cam lever. All 3 jaws close together on pipe by one mechanical action. Always straight threads, jamproof, 1" to 2" with 1 set of dies, fast size change—only 65R offers you so much for your money. Buy it at your Supply House.

P.S. The new TC workholder fits your present 65R!

The Ridge Tool Company • Elyria, Ohio, U.S.A.

RIDGID Work-Saver Pipe Tools

For more details circle NED-700 J7 on enclosed inquiry slip

5700 lb. steel crankshaft on two 3" wide Liftex Nylon Slings at Beloit plant, Fairbanks, Morse & Co.

Strong! No Rivets! No Metal!

Lifts soft or highly finished materials without scratching. Chemically treated to resist grease, abrasion and many chemicals and solvents. Stock sizes to lift up to 13,500 pounds, special sizes made to order. All with safety factor of 5.

WRITE TODAY FOR BULLETIN R

THE CALDWELL COMPANY, INC.
1123 FOURTH AVE., ROCKFORD, ILL.

For more details circle NED-701 J7 on enclosed inquiry slip

Permanently End Condensation Drip, Rust and Corrosion with NoDrip Plastic Coating!

Here is the inexpensive, easy way to solve your condensation problem once and for all. NoDrip plastic coating acts immediately to insulate and protect tanks, pipes, walls, ceilings, air ducts and other metal equipment against condensation drip, rust and corrosion. NoDrip can be applied by anyone without special experience with brush, trowel or spray. NoDrip is also resistant to acid, alkali and brine... protects concrete, brick, plaster, tile, wood or composition surfaces.

32-PAGE NoDrip DATA HANDBOOK Complete with photographs, charts and technical information to help solve your condensation problem. Write today!

Available at leading plumbing and mill supply houses
J. W. MORTELL COMPANY 526 Burch St., Kankakee, Ill.

For more details circle NED-702 J7 on enclosed inquiry slip

A COMPLETE LINE OF SPACE-SAVING RELAYS

• 600 Volts
• 10 Amperes

UP TO 4 CONTACTS
2 Normally Open
2 Normally Closed
Measures only
3-5/16" high x 2-5/8" wide!

UP TO 6 CONTACTS
4 Normally Open
2 Normally Closed
Measures only
3-11/16" high x 2-13/16" wide!

NEW!

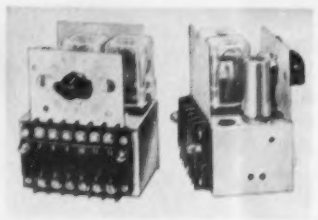
UP TO 10 CONTACTS
Either 6 Normally Open and 4 Normally Closed or 8 Normally Open and 2 Normally Closed
Measures only 5" high x 3" wide!

Write for Bulletin 8501D. Square D Company, 4041 N. Richards St., Milwaukee 12, Wis.

SQUARE D COMPANY

For more details circle NED-703 J7 on enclosed inquiry slip

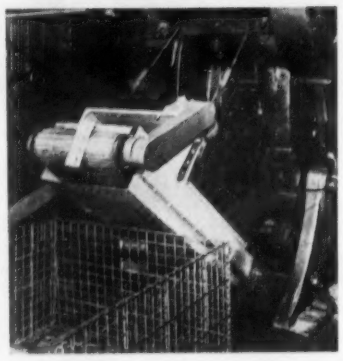
ELECTRONIC TIMER
in 0.2 to 24-second time ranges



Features found in over 40 timers of special design are embodied in this model 120 CK electronic timer which is offered in time ranges of 0.2, 0.5, 1.0, 3, 6, 12 or 24 seconds. Features include stop-motion control; self-reset timing with several units in sequence; momentary-start with nonrepeat, self-reset feature; sustained starting with immediate reset on opening of start switch; emergency timing-out in middle of time cycle; and adjustable timing between fixed pulses, repeat-cycle timing. The timer has direct-current starting relay to allow use of 115-v 25-400 cycle ac current; isolated load contacts; two sets of single-pole double-throw 8-amp contacts, one set to operate at start, one at end of time delay; and identical enclosed plug-in dc relays. Made by **Farmer Electric Products Co.**, Dept. N, 2300 Washington St., Newton Lower Falls, Mass.

For more details circle NED-704 J7 on enclosed inquiry slip

BELT CONVEYOR
three widths handle forgings, parts



Used between machines or from machine to storage or scrap containers, the series P Versa-Veyor belt conveyor handles stampings, forgings, castings, scrap and small parts on its standard 8, 12 and 16-in. belt widths. Special widths can be specified. A gearhead motor provides normal belt speed of 60 fpm. It has sealed self-aligning ball bearings, and channel and tubular steel undercarriage. Adjustment can be from horizontal to 60 degrees. Four-ply woven white cotton, three-ply black neoprene and woven galvanized steel wire belts, all with 1½-in. high cleats on 24-in. centers are available. One man can move the conveyor on 4-in. hard-tread wheels. Made by **Belt Corp.**, 8222 Stahl Rd., Orient, O.

For more details circle NED-705 J7 on enclosed inquiry slip

Wiring Terminals & Components

Burndy Corp.—"What Goes On Here?" is title of 8-page booklet which describes the products manufactured by this company's Omaton division. Non-technical language is used to explain the advantages and applications of electrical connectors, terminals, splices, panels and components for OEM, electronic, appliance, aircraft and military purposes.

For more details circle NED-706 J7 on enclosed inquiry slip

NEW! Self-Bonding *QUIK-PLATES* Fast, Permanent Identification

- ✓ No bolts, screws, rivets — no drilling or tapping. Apply in seconds.
- ✓ Four different self-bonding methods: Pressure-Sensitive, Water, Solvent, Heat activated.
- ✓ .004" anodized aluminum. Wide color range. Bond permanently to flat, curved, crinkled finishes.
- ✓ Get custom design, functional beauty at low cost with Brady Self-Bonding QUIK-PLATES.

61A

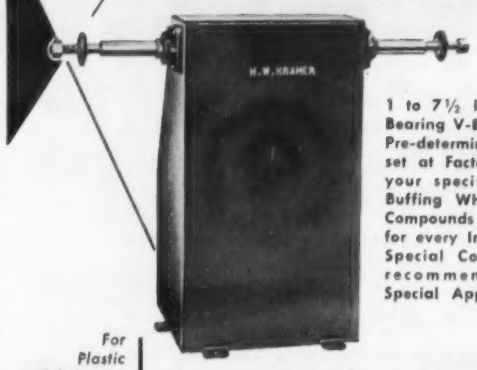
Write today for literature and free testing samples.

W.H. BRADY CO.
766 W. Glendale Ave. • Milwaukee 9, Wis.
Quality Industrial Identification since 1914

For more details circle NED-707 J7 on enclosed inquiry slip

Top BUFFING Performance

DESIGNED AND ENGINEERED TO BE AMERICA's No. 1 BUFFING LATHE



1 to 7½ H.P. Ball-Bearing V-Belt Drive. Pre-determined speed set at Factory or to your specifications. Buffing Wheels and Compounds available for every Industry... Special Compounds recommended for Special Applications.

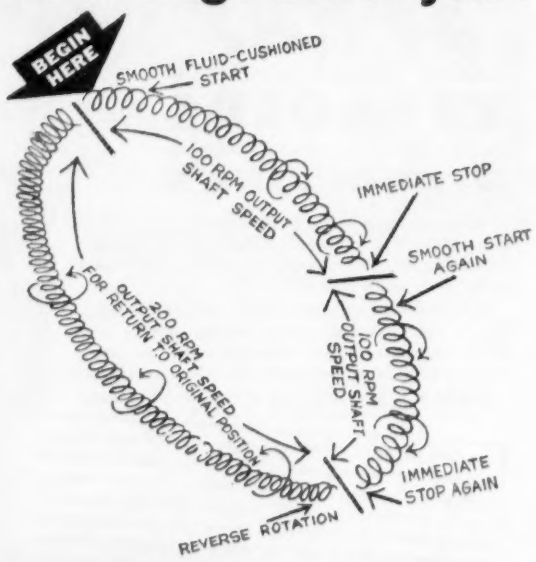
For Plastic Fabricating Equipment, Tumbling Machines and Compounds it's

For any of your Buffing Problems, Write Dept. PW for Cost-Saving Solution . . . and Better Buffing.

H. W. KRAMER CO.
120-30 JAMAICA AVENUE
RICHMOND HILL 18, N.Y.

For more details circle NED-708 J7 on enclosed inquiry slip

How would you solve this 5-stage drive cycle?



This one modern REULAND power package does all five!

Modern Reuland Power represents a whole new concept in electric motors. Today, motors are supplied as complete drive packages...*tailored to the needs of each customer.*

Shown here is a typical demonstration of *Modern Reuland Power.* Contained within this one frame is a fluid coupling ... two-speed reversing duty motor... gear reducer...and magnetic brake.

Would a similar drive *package* help *you?*

OUR NEW GENERAL CATALOG WILL COME IN HANDY—SENT FREE ON REQUEST

Gives details on Reuland's "Xpandable Design" and Free Special-Motor Library. Be sure to get a copy for your files.

REULAND MOTORS

REULAND ELECTRIC COMPANY
WESTERN DIVISION: Alhambra, Calif.
EASTERN DIVISION: Howell, Michigan
DISTRIBUTORS IN ALL PRINCIPAL CITIES

MODERN MOTORS FOR MODERN-DAY PRODUCTS

For more details circle NED-709 J7 on enclosed inquiry slip

New midget tools for high speed precision grinding

AIRETOOL
PNEUMATIC DIE GRINDERS

Perform the most intricate portable grinding jobs quicker and easier with these lightweight, easy-to-hold, air-powered grinders. They operate with a wide range of grinding and filing tools . . . have plenty of speed and power for fast, smooth cutting of hardened steels.

Airetool Midget Grinders are vibration free . . . quiet running . . . won't heat up. Ball bearing thrust and spray lubrication assures long trouble-free service.

Send for details on Airetool Pneumatic Tools: Midget Grinders, Horizontal and Vertical Grinders, Drills, Screwdrivers and Nutrunners.

Model 200
60,000 R.P.M.
5/8" dia. x 4 7/8" long
Wt. 4 oz.

Model 300 →
38,000 R.P.M.
1 1/4" dia. x 5 3/4" long
Wt. 12 oz.

Over 27 years experience in pneumatic motor equipment.

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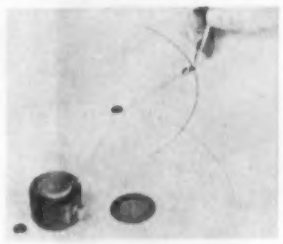
Canadian Plant: 37 Spalding Drive Brantford, Ontario
European Plant: Vlaardingen, The Netherlands

AIRETOOL MANUFACTURING COMPANY SPRINGFIELD, OHIO

For more details circle NED-710 J7 on enclosed inquiry slip

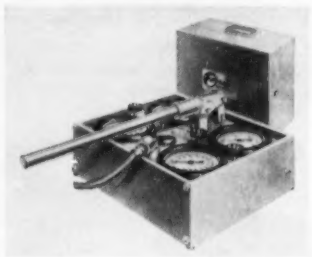
BEAM COMPASS
allows scribing up to 12-ft circles



This turret-shaped Sidewinder metal beam compass, about the size of a half-dollar coin, unreels enough linen thread to scribe up to 12-ft diameter circles. Measurements are controlled to fraction of an inch by line-locking clutch and sensitive rewind knob. Machine-formed pen or pencil gripsocket is clamped to one end of the line. Three interchangeable pins function as seating anchors, rewind handles and curvature guides. Compass can be used with pencil, ballpen or metal scriber. Price is $2.75. Made by **Laramie Chemical Corp.**, Dept. NE, 290 Main St., Stamford, Conn.

For more details circle NED-713 J7 on enclosed inquiry slip

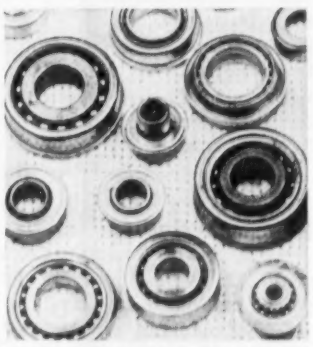
HYDROSTATIC TESTER
for equipment tests to 3000 psi



On-the-site hydrostatic testing of valves, pressure vessels, piping, steam generators and other process equipment at pressures up to 3000 psi can be made with the Porta-Tester. The 55-lb, 18 x 14 x 8-in. tester has a carrying case and includes four gages and 8 ft of flexible hydraulic tubing. Pump handle folds flat for storage. Tester can be used with water or other hydraulic fluids. Made by **Farris Engineering Corp.**, 551 Commercial Ave., Palisades Park, N. J.

For more details circle NED-714 J7 on enclosed inquiry slip

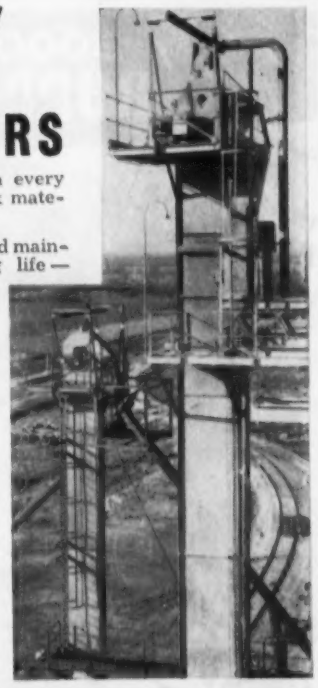
BALL BEARINGS
low speed type augments line



A full selection of semi-precision, low speed type ball bearings has been added to the current Freeway split-race series to fit shaft sizes from 1/8 through 1-in. diameter. Included in the standard and semi-standard Omega-Type line are many radial and thrust bearings (flanged and unflanged), single and double race rollers, prelubricated units, dust-sealed assemblies and others. Offered by **Freeway Washer & Stamping Co.**, Box 1756N, Cleveland 5, O.

For more details circle NED-715 J7 on enclosed inquiry slip

JEFFREY BUCKET ELEVATORS



Rise to the occasion in every industry requiring bulk material handling.

Initial economy, reduced maintenance expense, long life — all important in every Jeffrey installation.

Types include vertical or inclined, continuous, positive or centrifugal discharge, standard or super-capacity, open or enclosed, chain or belt . . . up to 300-ft. centers . . . as much as 900 TPH.

Whatever your elevator need, get a quotation from Jeffrey. Write for Catalog 850 to General Engineering Sales Division, The Jeffrey Manufacturing Co., Columbus 16, Ohio.

JEFFREY

THE JEFFREY MANUFACTURING COMPANY • COLUMBUS 16, OHIO

For more details circle NED-716 J7 on enclosed inquiry slip

Magcoa Yard Ramps—

Portable, easy to handle . . .

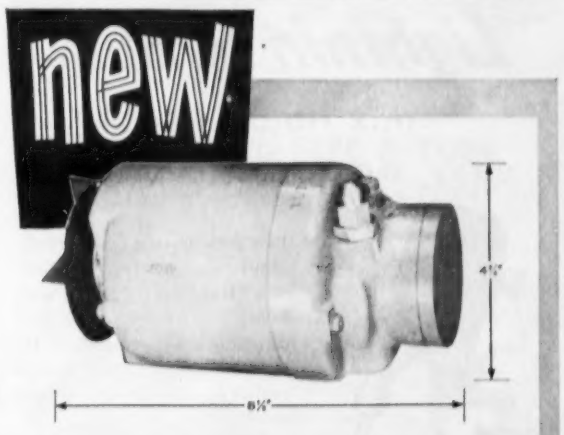
like owning an extra dock!

A Magcoa portable Yard Ramp enables you to load and unload when you choose . . . where you choose. It's a loading dock on wheels. For details, write direct, or circle reader service card.

magcoa TRADE MARK

MAGNESIUM COMPANY OF AMERICA
MATERIALS HANDLING DIV. • EAST CHICAGO 6, IND.

For more details circle NED-711 J7 on enclosed inquiry slip



POWERMITE

PUMP and MOTOR COMBINATION

- *COMPACT*
- *LIGHTWEIGHT*
- *ECONOMICAL*

This compact, new POWERMITE motor-pump combination, a Tuthill exclusive, was developed to meet the requirements of original equipment manufacturers with unusual space and weight limitations.

Motor and cooling blower have, in effect, been incorporated into the internal gear positive displacement rotary pump. The whole unit takes up no more space than a standard electric motor. A single shaft serves all units of the Powermite—and the elimination of couplings, other parts and labor permit substantial economies for OEM applications.

The pump section contains a built-in strainer, and, if desired, an adjustable relief valve. Powermite can be furnished with cooling blower, as illustrated, or supplied with a shaft extension for driving other accessories.

Powermite can be furnished in a wide variety of pump and motor combinations for use in hydraulic, oil burning, lubricating, and other services involving many different fluids. For example, the model illustrated has a capacity of 18 gph at 300 psi, and is driven by a 1/12 hp motor at a speed of 1750 rpm.

Manufacturers desiring to investigate the advantages of incorporating Powermites into their products are invited to submit detailed specifications. Or, if preferred, a Tuthill representative will call.

TUTHILL PUMP COMPANY
959 East 95th Street, Chicago 19, Ill.
Canadian Affiliate: Ingersoll Machine & Tool Company, Ltd., Ingersoll, Ontario, Canada
PUMPS FOR YOUR PURPOSE

For more details circle NED-717 J7 on enclosed inquiry slip

LOUISVILLE STAGES

For more information, write:
LOUISVILLE LADDER COMPANY
Dept. N-3, 1101 West Oak St., Louisville 10, Ky.

LOUISVILLE ALL TYPES OF ALUMINUM LADDERS PLANKS STAGES

For more details circle NED-712 J7 on enclosed inquiry slip

It's NEW! 3000 SERIES BURR-RITE Sr.

NEW MACHINE NEW MEDIA Reduce Your Deburring Costs

● Is DEBURRING required on your products? Do you realize the savings that can be made by the Barrel Finishing process? Write us today and get full details about this new, improved machine. SEE its value on your parts . . . Send samples for free processing today.

Globe Div. CASALBI CO.
542 Wayne St., Jackson, Michigan
Barrel Finishing Equipment • Media • Compounds

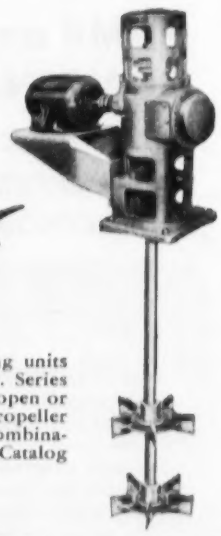
▲ For more details circle NED-718 J7 on enclosed inquiry slip ▲

"Lightnin® Mixers"

mix fluids the easy, economical way

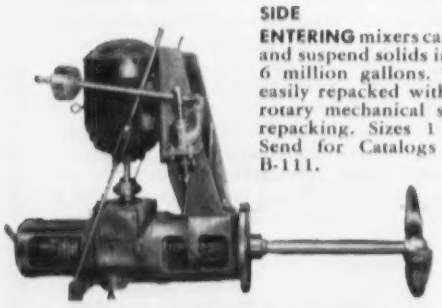
Just watch your productivity climb when you let a LIGHTNIN Mixer do the work now being done by hand or with old-fashioned equipment. Increased productivity means reduced costs — and less work.

You can get a LIGHTNIN Mixer for *any* fluid mixing job. Exact mixing results are guaranteed, or your money back.



PORTABLE MIXERS turn any open vessel into an efficient, low-cost mixing unit. Adjustable for slow-rolling or rapid double-action mixing. Thirty models, ⅛ to 3 HP; electric or air driven; direct or gear drive. Send for Catalog B-108.

TOP ENTERING or bottom entering units for larger-horsepower mixing jobs. Series "E" LIGHTNINS can be installed on open or closed tanks. Turbine, paddle and propeller types. Hundreds of power-speed combinations. Sizes 1 to 500 HP. Send for Catalog B-102.



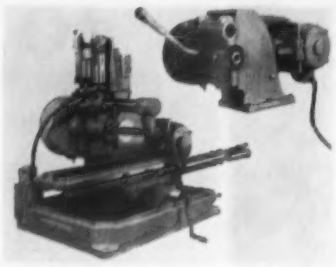
SIDE ENTERING mixers can mix, blend, and suspend solids in tanks up to 6 million gallons. Stuffing box easily repacked with tank full—rotary mechanical seal obviates repacking. Sizes 1 to 25 HP. Send for Catalogs B-104 and B-111.

FREE CATALOGS. Check the reader service slip for any catalog mentioned above. Or ask for Condensed Catalog B-109—it describes the full line and tells how to get free engineering help on fluid mixing.

MIXING EQUIPMENT Co., Inc.
165-j Mt. Read Blvd., Rochester 11, N.Y.
In Canada: Greey Mixing Equipment, Ltd., Toronto 10, Ont.

▲ For more details circle NED-719 J7 on enclosed inquiry slip ▲

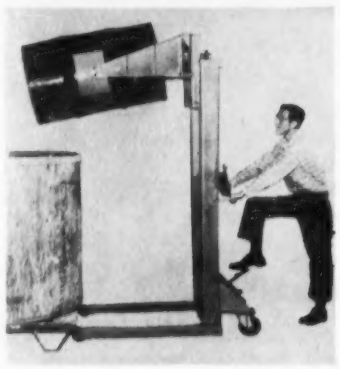
MILLING MACHINE
spindle speeds up to 5000 rpm



Slotting, sawing, face milling, keyway cutting, slab milling, boring and many other operations can be handled by the No. 1 U. S. Half-Mill production or toolroom milling machine. Basic machine is powered by 1 or 2-hp motor with rack and pinion head feed. It can be equipped with a micrometer depth stop, screw manual head feed and longitudinal screw feed table for toolroom and light horizontal boring. Combination of 18-in. stroke air-hydraulic table feed and 4-in. stroke head feed makes unit a semiautomatic production machine. With carbide or ceramic tooling, it can be equipped with high speed head and motor for selective spindle speeds to 5000 rpm. Coolant system can be added since reservoir and collecting area are cast into base. Made by **Cincinnati Mfg. Corp.**, U. S. Burke Machine Tool Div., 2 Brotherton Rd., Cincinnati 27, O.

▲ For more details circle NED-720 J7 on enclosed inquiry slip ▲

DRUM HANDLER
lifts container 63 in. for pouring



Only 6½ ft high, this hydraulically operated drum handler will elevate a drum 56 in. in its vertical position and to 63 in. for pouring. Drum is easily tilted and extends 10 in. over lip of tank in pouring position. Large wheels make unit easy to maneuver for pouring, stacking, tiering, truck loading and unloading, and for taking drums in and out of racks. Grab arms for carboys or fiber drums are available and readily interchangeable. Made by **Hamilton Equipment Co.**, 35 Beckwith Ave., Paterson, N. J.

▲ For more details circle NED-721 J7 on enclosed inquiry slip ▲

Steam Specialties

White Sewing Machine Co., Strong, Carlisle & Hammond Div.—Descriptions, illustrations and prices of Strong steam traps, strainers, separators, flash separators, reducing valves, block steel valves and engine stops are found in 60-page catalog 69. Much information is in table form. Also covered are selection, installation and trouble shooting. Prices are given.

▲ For more details circle NED-722 J7 on enclosed inquiry slip ▲

YOU'LL FIND IT ALL HERE

▶ If you are looking for new ways and means to improve your product, *and save money too*, here's an idea source guaranteed to spark your imagination and give you a wealth of hints, tips, and suggestions.

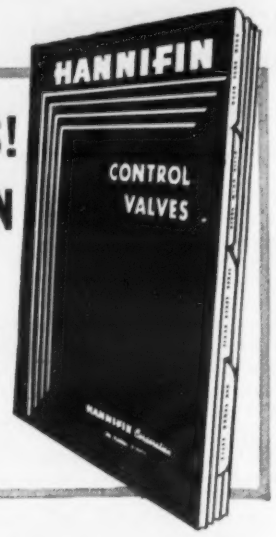
This 20-page fact-filled STAR catalog contains complete descriptive and engineering data on the full line of STAR Ceramics. A big selection chart, complete with mechanical and electrical properties, makes the job of selecting the right STAR material for your product a cinch. Like a free copy? Write *today* for Catalog 57.

the STAR porcelain company
50 Muirhead Avenue, Trenton 9, N.J.

California Representatives:
So. Calif.: Edwin E. Starr, 4101 Rhodes Ave., N. Hollywood, Calif. STanley 7-5879.
No. Calif.: Thermo Materials, Inc., 44 Encino Ave., Palo Alto, Calif. DAvenport 6-2780.

▲ For more details circle NED-723 J7 on enclosed inquiry slip ▲

DIMENSIONS! APPLICATION DATA! DISCOUNTS! PRICES!

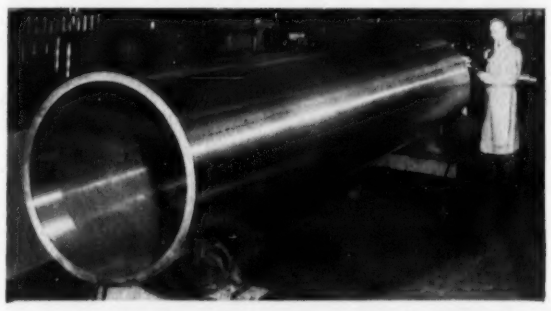


The Air Control Valves you need are in this catalog

• Poppet-Type • Rotary Disc
• Sliding Disc • Speed Control

HANNIFIN
Hannifin Corporation, 527 S. Wolf Road, Des Plaines, Illinois
AIR and HYDRAULIC CYLINDERS • PRESSES • AIR CONTROL VALVES

▲ For more details circle NED-724 J7 on enclosed inquiry slip ▲



You'll find them better for pressure if they're
SHENANGO CENTRIFUGAL CASTINGS

WHATEVER the inside or outside pressures, Shenango centrifugal castings withstand them better.

Parts cast by the Shenango centrifugal process are much tougher because their finer, *pressure-dense* grain avoids stress concentrations while providing greater strength, better elongation and freedom from such costly defects as sand inclusions, blowholes and such.

Whether you need rings, rolls, sleeves, liners, bushings, bearings, mandrels or *any* annular or symmetrical part . . . ferrous or non-ferrous . . . in whatever shape, size or dimension . . . Shenango can do the job *better!*

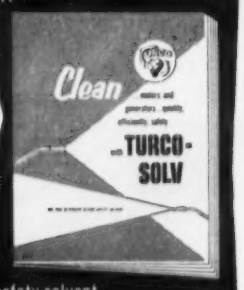
For informative bulletins, it will pay you to write now to: *Centrifugally Cast Products Division*, The Shenango Furnace Company, Dover, Ohio.

SHENANGO CENTRIFUGAL CASTINGS
COPPER, TIN, LEAD, ZINC BRONZES • ALUMINUM AND MANGANESE BRONZES
MONEL METAL • NI-RESIST • MEEHANITE METAL • ALLOY IRONS

▲ For more details circle NED-725 J7 on enclosed inquiry slip ▲

spray clean
• ELECTRICAL EQUIPMENT
• PLANT EQUIPMENT

free folder



tells why . . . only
TURCO-SOLV

the detergent-action safety solvent offers you this unchallenged combination of user benefits

• SAFE ON ALL EQUIPMENT • PEAK CLEANING EFFICIENCY
• NO RESIDUE • OPTIMUM EVAPORATION RATE
• NON-FLAMMABLE* • LOWER TOXICITY

*UNDER NORMAL USE CONDITIONS

TURCO PRODUCTS, INC.
Chemical Processing Compounds
6135 So. Central Ave., Los Angeles 1, Calif.
Factories: Newark, Chicago, Houston, Los Angeles, London, Rotterdam, Sydney, Mexico City, Naha (Okinawa)
Manufactured in Canada by B. W. Deane & Co., Montreal
Offices in all Principal Cities

▲ For more details circle NED-726 J7 on enclosed inquiry slip ▲

Just one of *101* Stud Driver uses!

Application: Anchoring pipe or conduit to concrete.

REMINGTON Stud Driver

Light, medium or heavy-duty fastening is easy with this cartridge-powered tool. Sets *six* ¼" or ¾" diameter studs a minute in concrete or steel—no drilling, no outside power required! Change barrel size in 90 seconds, *on the job*. Over 40 Remington Studs, plus scientifically graded 22 and 32 caliber Power Loads. *Send for Free Booklet* on this time and money-saving tool. Mail reader service card today.

Remington DU PONT

Industrial Sales Div. Dept. NED-9, Remington Arms Co., Inc., Bridgeport 2, Conn.

▲ For more details circle NED-727 J7 on enclosed inquiry slip ▲

IF PLANT VENTILATION IS YOUR 'BABY'

. . . you have a big job! Problems of fume, steam and smoke removal land in your lap. Some areas are too hot for peak work efficiency—fresh air has to be moved into every part of the plant—perhaps humidity control is important or paint booths have to be ventilated . . . You may have any number of different problems, but . . .

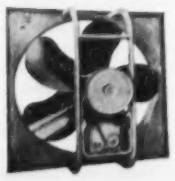
Power Line

CAN PROVIDE EVERYTHING . . . FROM SURVEY TO COMPLETE INSTALLATION!

For over 30 years we have been fan specialists. We can effectively assist in the design of a complete plant ventilating system or a spot cooling device. Furthermore, we are not limited in our recommendations because we have over 1000 models and sizes in our line to choose from . . . virtually every type of fan and ventilator that you could possibly use.

Use Power Line's Engineering Experience

Power Line engineers can provide practical solutions to any ventilating problem . . . We'll gladly make a survey and make our recommendations without cost or obligation—just call or write us!



TYPE BV

TYPES DRP & BRP

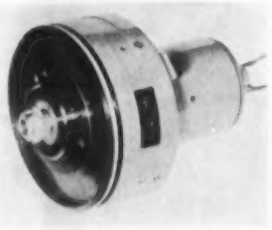
TYPES DRE & BRE

AD NO. 59-35 A

Power Line FAN COMPANY
PLAINFIELD, NEW JERSEY

▲ For more details circle NED-728 J7 on enclosed inquiry slip ▲

ROTARY INDUCTOSYNS
7 and 12-in. units offered



Seven and 12-in. rotary Inductosyns are now available in addition to the original 3-in. model and feature accuracies of 2 and 1 second of arc, respectively. Both are 360-pole, 180-speed types. Being a multipolar device, each unit is designed to perform as a conventional resolver that has been geared up to 180:1. Since ratio is gearless, system is inherently accurate. Unit can be used as an electromechanical dividing head, a multispeed data transmission system, a precise position servo, an electronic back-lash-free gear ratio, a high speed electromechanical phase shifter, or an angular pick off accurate to 1 second of arc. Packaged units are available. Made by **Farrand Controls, Inc.**, 4401 Bronx Blvd., New York 70, N. Y.

▲ For more details circle NED-729 J7 on enclosed inquiry slip ▲

CARBIDE DRILLS
in 1/16 through ¾-in. sizes

Steels hardened to 40-65 Rockwell C can be drilled without annealing, reworking and rehardening by line of carbide Harduty drills. Drills eliminate need for reaming, in most cases, and will penetrate hard outer cases and drill intricate parts. Sizes range from 1/16 through ¾-in. A well selected set for tool, die and machine shops is offered as well. Made by **Chicago-Latrobe**, 413 W. Ontario St., Chicago 10, Ill.

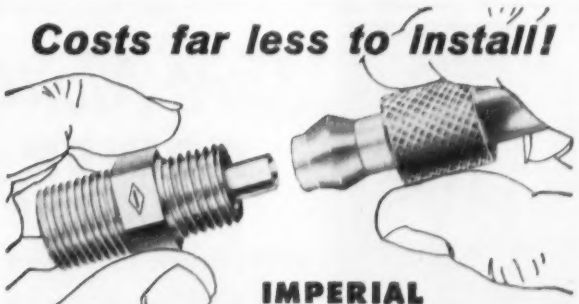
▲ For more details circle NED-730 J7 on enclosed inquiry slip ▲

STEEL DRUM HANDLER
transports, rotates, tilts, drains

Loaded 55-gal steel drums can be raised, transported, rotated, tilted, and drained with the improved Barrel - Lift. Self - locking safety stops prevent accidental movement of the operating handle. Tilt locks hold drum in vertical or horizontal position. Drum returns to vertical position after draining. Unit has adjustable leverage for drum weights from 500 to 1000 lb, floor clearances from 5⅛ to 11½ in., welded steel construction, rubber tired wheels, and ball bearing swivel rear caster. Made by **Morse Mfg. Co.**, 727 W. Manlius St., East Syracuse, N. Y.

▲ For more details circle NED-731 J7 on enclosed inquiry slip ▲

Costs far less to Install!



IMPERIAL
Poly-Flo TUBE FITTINGS
and Polyethylene tubing

Poly-Flo fittings and tubing furnished in 1/4, 5/16, 3/8 and 1/2" O.D. sizes. Recommended for working pressures from 75 to 160 psi. Temperatures from —90° to + 175° F.

Ask for Bulletin No. 3025

Fittings need only be finger tightened . . . tubing bends by hand—that's why it's easy to design *huge savings* into installations previously made with copper or other tubing. Poly-Flo fittings used with polyethylene or other plastic tubing end complicated assembly, tube bending, flaring and cutting. No wrench work required!

Best for instrumentation, low-pressure circuits, coolant lines, laboratory equipment, etc. Tubing is flexible and tough . . . resists most chemicals.

Accessories include tube racks for mounting of tubing, quick-disconnect and other shut-off valves, plus convenient make-up kits of tubing and fittings.

THE IMPERIAL BRASS MFG. CO., 510 S. Racine Ave., Chicago 7, Ill.
In Canada: 334 Lauder Ave., Toronto, Ontario

IMPERIAL Industry's Most Complete Line of Tube Fittings and Tubing Tools

▲ For more details circle NED-732 J7 on enclosed inquiry slip ▲

CHICAGO DREIS & KRUMP **PRESSES**
STRAIGHT-SIDE TYPE

with large die area capacities up to 400 tons AND GAP TYPE PRESSES

Complete recommendations for any job on request

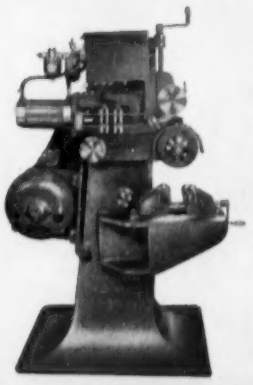
CHICAGO DREIS & KRUMP — Press Brakes · Straight-Side-Type Presses · Press Brake Dies · Hand and Power Bending Brakes · Special Metal-Forming Machines

DREIS & KRUMP
MANUFACTURING CO.
7436 South Loomis Boulevard, Chicago 36, Illinois

▲ For more details circle NED-733 J7 on enclosed inquiry slip ▲

NOW! CUT UP TO 1,000 PIECES OF PIPE PER HOUR

Continental PIPE & TUBE CUT-OFF MACHINES

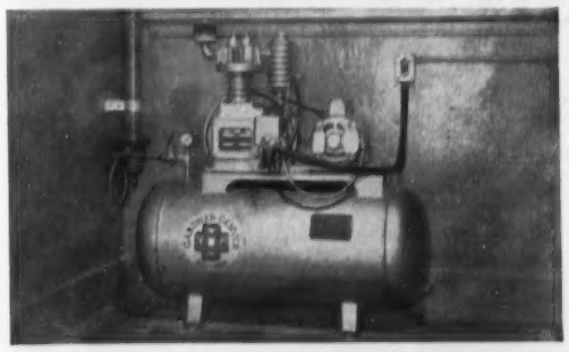


Cut Pipes and Tubes faster with Continental High Speed Cut-Off Machines. Lowest maintenance means less cost to you. ⅜" to 12¾" O.D. capacities, hand or automatic air - operated bench and floor models.

Request free catalog.

Continental MACHINE CO.
SINCE 1919
1952 N. MAUD AVE. • CHICAGO 14, ILL.

▲ For more details circle NED-734 J7 on enclosed inquiry slip ▲



Now! Oil-Free Air from Small G-D Compressor

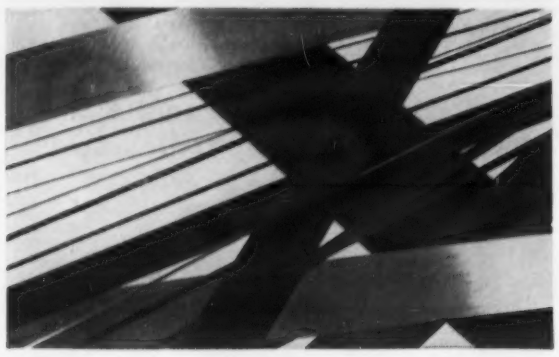
Now you can have oil-free air from a small, space-saving compressor—the new Gardner-Denver CACB.

Heart of the CACB is the carbon parts which require no oil or water lubrication. This single-stage, air-cooled compressor supplies 4 to 5 cu. ft. of oil-free air per minute. Suitable for discharge pressures of 40 to 100 psi.

ENGINEERING FORESIGHT—PROVED ON THE JOB IN GENERAL INDUSTRY, CONSTRUCTION, PETROLEUM AND MINING

GARDNER - DENVER
Gardner-Denver Company, Quincy, Illinois

▲ For more details circle NED-735 J7 on enclosed inquiry slip ▲



Cold-rolled high carbon

SPRING STEEL

• National-Standard Company's ATHENIA STEEL DIVISION produces many types of strip steel to precision specifications . . . temper, finish, color, edge, forming characteristics, uniformity, tolerance, etc. Products include flat steels in widths up to 6½" tempered and 16" cold rolled or annealed; thicknesses from .001 to .065, depending on width.

Write to Athenia for complete information on what we can provide and on our facilities for development of new or special steel.

Athenia Steel Division, Clifton, New Jersey

NATIONAL STANDARD

For more details circle NED-736 J7 on enclosed inquiry slip

NIAGARA 30 AND 50 TON PRESS BRAKES

HERE'S MEANINGFUL STREAMLINING . . . and at its very best! *Everything's inboard:* Motor, belts, flywheel, clutch, brake and gears . . . yes, even the connections, pitmans and ram adjustment mechanism. *Nothing protrudes!*

Resourceful designing has made it possible to provide heavier, deeper uprights with relatively no increase in floor space. Net result: A 50% deeper throat for larger work.

HERE'S PERFORMANCE that can't be matched! These all-new Niagara Press Brakes have a smoothness of action all their own. Niagara Power Features . . . Power Clutch, Power Brake, Power Treadle . . . assure easy, instant response to every command. The ram can be micro-jogged smoothly and softly to a layout line, or stopped on a dime at full speed!

Proved on mighty Niagara Presses, Niagara's Electro-Pneumatic Friction Clutch engages in a fraction of a second, disengages even faster, and *fails safe!* Featuring simplified construction, it's a low inertia, heavy duty unit that's designed to outperform and outlast any other press brake clutch. Friction plates automatically compensate for wear . . . no adjustment required.

Spring applied, Niagara's powerful Air Releasing Brake can't fail for it does not depend on energy (air or electricity) to bring the machine to an immediate halt.

HERE'S RUGGEDNESS to take extreme loads in stride! Niagara's solid, all-welded steel one-piece frame with integral wrap-around crown provides maximum resistance to deflection. *There's nothing to work loose!* Utmost strength and rigidity are assured.

Straddle mounted between anti-friction bearings, hardened steel gears run in a sealed oil bath. Centralized pressure lubrication delivers oil to all main bearings, connection bearings and gibs with a single shot.

preview these ultra-new machines

Find out what they can do for you by writing for Niagara's new, illustrated Bulletin 90 today.

NIAGARA MACHINE & TOOL WORKS, BUFFALO 11, N. Y.

DISTRICT OFFICES

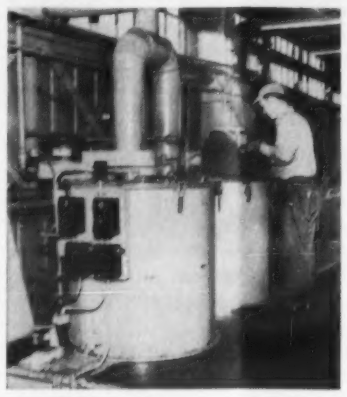
Boston • Buffalo • Cleveland • Detroit • Indianapolis • New York • Philadelphia

Distributors in principal U. S. Cities and major foreign countries

America's most complete line of presses, press brakes, shears, other machines and tools for plate and sheet metal work.

For more details circle NED-737 J7 on enclosed inquiry slip

FILTER WASHER & OILER
cleans 480 to 640 filters in 8 hr



One man can wash and oil from 480 to 640 permanent type air conditioning filters in an 8-hour shift in this Safe-N-Ezy combination filter washer and oiler. Centrifugal force, combined with the cleaning and oiling cycles of the washer-oiler gives each filter the exact amount of oil specified by the manufacturer. Cleaning is by an alkaline solution. Machines will hold from three to nine standard size filters. Washing and oiling drive motors are 1-hp, 900-rpm, 220-440-v "pancake" type units with vertical shafts. Pump motors are also pancake type and rated 1½ hp, 1800 rpm. Made by **Paxton-Mitchell Co.**, 2614 Martha St., Omaha, Nebr.

For more details circle NED-738 J7 on enclosed inquiry slip

SMALL MOTOR STARTER
for single-phase motors to 1 hp

Developed for use in powering such equipment as grinders, conveyors, presses, blowers and mixers, this manual motor starter has a plug-in heater that can be inserted in a matter of seconds. It will control up to 1-hp single - phase motors. Compact design conserves space. Straight-through wiring is used, and overload protection is afforded by bimetal thermal mechanism which withstands momentary overloads. Panel and flush mounted types, with or without indicating light, and combinations of a starter and hand-off-automatic selector switch or another starter are available. General purpose, dust-tight, water-tight and explosionproof enclosures are offered, as is a guard that can be locked in on or off position. Made by **General Electric Co.**, General Purpose Control Dept., 1 River Rd., Schenectady 5, N. Y.

For more details circle NED-739 J7 on enclosed inquiry slip

Overhead Conveyor Planning

Chainveyor Corp.—Aid in planning the installation of low-cost power and manual overhead conveying systems are given in illustrated planning folder. Details of system and its components as well as planning grids for lay-out of system are included.

For more details circle NED-740 J7 on enclosed inquiry slip

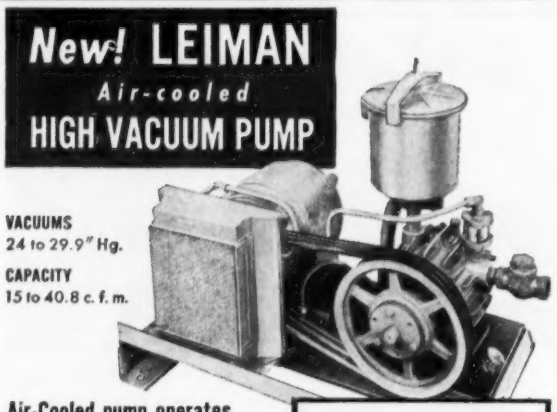
NEW SILENCER
for air exhausts

High noise levels are effectively reduced by a new silencer developed by Air-Maze Corporation. Fits directly to exhaust ports or piping. Breaks up shock waves to attenuate objectionable noise without noticeably impairing efficiency of air operated equipment.

Standard sizes for ⅛"- ¼"- ⅜"- ½"- ¾" pipe sizes.

Write for details in Bulletin KK-657, **THE AIR-MAZE CORPORATION**, Cleveland 28, Ohio. Department NE-9. *Advt.*

For more details circle NED-742 J7 on enclosed inquiry slip



Air-Cooled pump operates 24 hours a day at 140° F.

This air-cooled Leiman Rotary Positive High Vacuum Pump gives you greater capacity in a smaller pump—a compact pump unit that can be placed anywhere. It incorporates the Leiman 2-wing rotary pump, with steel blades, cast iron cylinders and patented automatic wing adjuster which assures leak-proof seal for years and years. Put one on test.

Write for detailed folder and prices.

LEIMAN BROS., INC.
167 Christie St., Newark 5, N. J.

FEATURES
- Radiator-cooled lubricating system circulates pre-cooled oil through pump
- Eliminates vapor
- Eliminates water-cooling—piping—leakage
- Can not overheat
- Saves floor space 30" long—27" high—21" wide

Other Leiman Air Pumps:
Vacuums to 29.9" Hg.
Pressures to 20 psig.
Capacities to 162 c.f.m.
Get complete catalog.

For more details circle NED-743 J7 on enclosed inquiry slip

Save Money . . . with a CAR-ANTH PNEUMATIC

POWER BENDER for bending WIRE, STRIP METAL or TUBING

costs much less than Automatic Equipment

NOTE THESE FEATURES: Timken bearing equipped • Protective hood • Powerful—air cylinder • Pressure Ratio 10 to 1 • Interchangeable pin • Adjustable Stroke Stop—Any degree of bend up to a complete loop— • Bench operated with foot pedal • Mounted on heavy steel base • Can make up to 1200 bends per hour • On small diameter wire bend 2 or more at a time • Operates entirely by air pressure • Experienced operators not necessary • Set up in 5 minutes • Bend wire and strip metal up to 2" radius • maximum ⅜" in bright basic wire • Can be adapted to tube forming • All strokes the same • Complete, ready to operate by merely attaching to air line. Valve and 10 ft. of hose furnished.

Send pieces of material and drawing or sketch of job you want done.

Write for more information of what it will do. **CAR-ANTH Mfg. & Supply Co.** 411 Eichelberger St. Louis 11, Mo.

For more details circle NED-741 J7 on enclosed inquiry slip

A simple, direct reading on the Alnor Velometer gives you an instant measure of air flow speed through grilles, ducts, furnaces, spray booths, or in the open.

Precision-built and self-contained, this portable instrument brings laboratory standards to the line or field installation. Available in a wide variety of scale ranges, full assortment of jets and fittings. You'll want all the facts (no safety department should be without a Velometer). Get Bulletin 2448-G. Attach this ad to your letterhead and mail to: Illinois Testing Laboratories, Inc., Room 529, 420 No. LaSalle St., Chicago 10, Illinois.

PRECISION INSTRUMENTS FOR EVERY INDUSTRY

Alnor

For more details circle NED-744 J7 on enclosed inquiry slip

Mr. Clyde Dockey
PURCHASING AGENT
Midwest Abrasive Company
Owosso, Michigan

"Even our janitors approve of Westroll Towels"

"We first purchased Westroll Towels with the idea that we would be supplying our men with soft, absorbent towels, the use of which would be economically controlled. Now we find that even our janitors are enthusiastic about Westroll. Our washrooms stay free of litter—and one filling of our Westroll Dispensers is equivalent to four fillings of ordinary flat towel dispensers," says MR. CLYDE DOCKEY, Purchasing Agent for the Midwest Abrasive Company, Owosso, Michigan.

"When you consider these economies and conveniences, you can see why we're all pleased with Westroll."

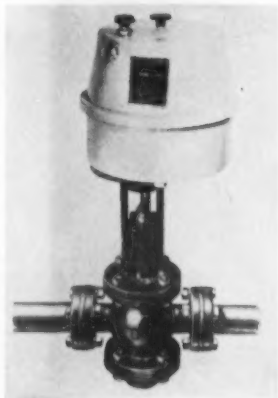
FREE

Would similar savings interest you? Send for our free folder on cutting towel costs with Westroll. Just check the reader inquiry service in this magazine. Or write—

WEST DISINFECTING COMPANY
Dept. 16. 42-16 West Street, Long Island City 1, N. Y.

For more details circle NED-745 J7 on enclosed inquiry slip

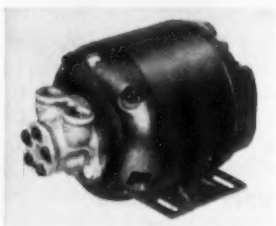
VALVE ACTUATOR responds to control signals



This electro - hydraulic valve actuator is designed to operate from signals supplied by commercial controllers, remote positioning devices or directly from the measuring element. It can be used on any valve using ½ to 1½-in. full stroke and needing less than 200-lb thrust. Standard signal range is from 1 to 5 or 4 to 8 ma dc. For alternating current operation, an internal rectifier is supplied. Made by **Askania Regulator Co.**, 242 E. Ontario St., Chicago 11, Ill.

For more details circle NED-746 J7 on enclosed inquiry slip

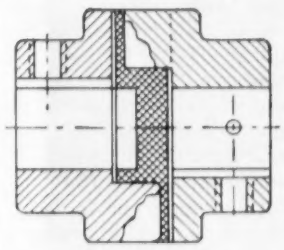
PUMP-MOTOR UNIT delivers pressures up to 1500 psi



Suited for hydraulic power, oil burner, lubrication and other services involving many different fluids, this positive displacement motor-pump is compact and easy to install. The rotary pumps employed range in capacity from 20 to 300 gph and in pressures up to 1500 psi. The combinations include ¼-hp and larger motors. Made by **Tuthill Pump Co.**, Dept. PR, 937 E. 95th St., Chicago 19, Ill.

For more details circle NED-747 J7 on enclosed inquiry slip

FLEXIBLE COUPLING cushion compression transmits load



Weighing about ⅓-lb, the L-075 cast aluminum flexible coupling transfers load entirely by cushion compression, thus minimizing wear and abrasion. Entire one-piece spider type load cushion can be reversed for doubled service life as only the load ends are under compression on non-reversing loads. Buna-N, leather, Bakelite or Bakelite-buna-N combination cushions are visible for inspection at all times. Coupling is rated for loads of 1/10-hp at 100 rpm up to 2 hp at 3600 rpm. Bore sizes range from ¼ to ⅞-in. and dimensions are 1 ¾ in. OD by 2 ⅛ in. long. Made by **Lovejoy Flexible Coupling Co.**, Dept. NDC, 4891 W. Lake St., Chicago 44, Ill.

For more details circle NED-748 J7 on enclosed inquiry slip

Mr. Hi Frequency, the Electronic

"policeman" Nabs Tramp Metal

Gives Positive Protection

THIS electronic policeman on your production beat always protects against trouble-causing, quality-robbing tramp metal. Magnetic or non-magnetic particles, no matter how deeply embedded, cannot get past the unfailing eye of the metal detector without triggering the warning or reject mechanism.

The Allis-Chalmers metal detector is economical to operate and is easily installed in any production set-up. For complete information, contact your nearby A-C office or write Allis-Chalmers, Industrial Equipment Division, Milwaukee 1, Wis. Ask for Bulletin 15B7217B.

ALLIS-CHALMERS A-C
A-5286

For more details circle NED-749 J7 on enclosed inquiry slip

YOU'VE GOT TO HAND IT TO PURCHASING!

KESTER FLUX-CORE SOLDER has long been first choice with an overwhelming percentage of the nation's Purchasing Agents. Most P.A.'s are well aware of Kester Solder's quality ingredients and manufacture; it makes their job easier!

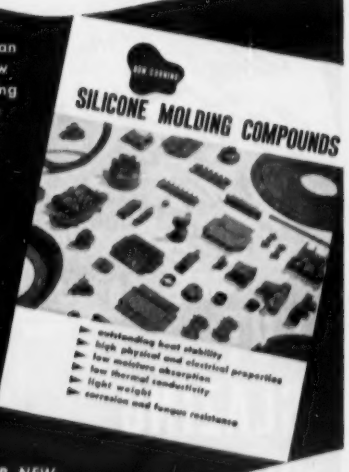
SEND FOR the 78 page Kester Textbook, "Solder . . . Its Fundamentals and Usage." It's free.

KESTER SOLDER COMPANY
4249 Wrightwood Avenue, Chicago 39, Illinois • Newark 5, New Jersey • Brantford, Canada

For more details circle NED-750 J7 on enclosed inquiry slip

get this NEW data on SILICONE MOLDING COMPOUNDS

Parts that resist 700 F can be fabricated from Dow Corning Silicone Molding Compounds. In addition to heat stability, they possess high strength, light weight, low thermal conductivity, and excellent dielectric properties. Dow Corning molding compounds are chemically inert and do not support fungus. New booklet contains full information.



SEND FOR NEW BOOKLET AND FREE SAMPLE DEPT. 5421

first in silicones

Dow Corning CORPORATION
MIDLAND, MICHIGAN

For more details circle NED-751 J7 on enclosed inquiry slip

THE ULTIMATE in testing perfection
Dillon UNIVERSAL TESTERS

Here's a low cost tester that operates in tensile, compression, transverse or shear. This inexpensive instrument can make *hundreds* of accurate checks daily on metal, plastics, wire, rubber, springs, etc. Handles round, flat or special shapes. More than 15 gripping fixtures available. Max. indicator. Self-aligning grips. Hand wheel operated or motorized. Meet ASTM & Fed. specs. Rugged & fast. Calibrated with certified dead weights. Recorder optional. Max. capacity 300 lbs.

MODEL M. For low strength materials between 0 & 300 lbs. Pendulum-type with 5 scales.

MODEL L. Heavier unit for materials up to 125,000 lbs. PSI. 7 interchangeable gauges provide wide range.

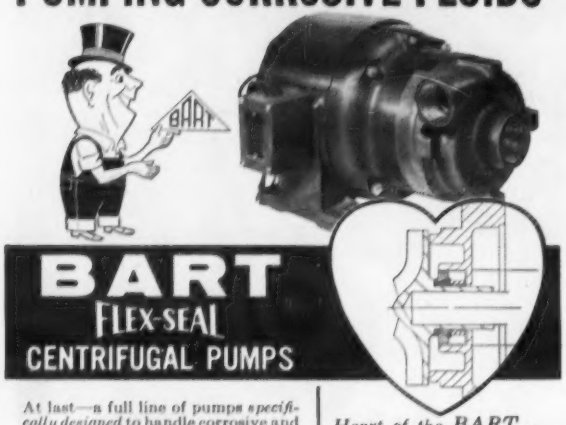
Write For brochures and LOW price schedule . . . today!

W. C. Dillon & CO., INC.
14578NE Keswick St., Van Nuys 1, Calif.
"suburb of Los Angeles"

For more details circle NED-752 J7 on enclosed inquiry slip

now! greater ***safety*** *and* ***efficiency*** *in*

PUMPING CORROSIVE FLUIDS



At last—a full line of pumps *specifically designed* to handle corrosive and abrasive fluids in the 1 to 80 GPM range, at heads to 75 feet.

No longer need you cut down bigger pumps in range and lose efficiency—or put up with undependable smaller pumps.

Bart pumps have fewer parts to wear or get out of order. Six models, each in corrosion resistant Type 20 Stainless Steel. Or other alloys on special order.

Write for catalog and performance curves.

Heart of the BART.. the exclusive Flex-Seal!

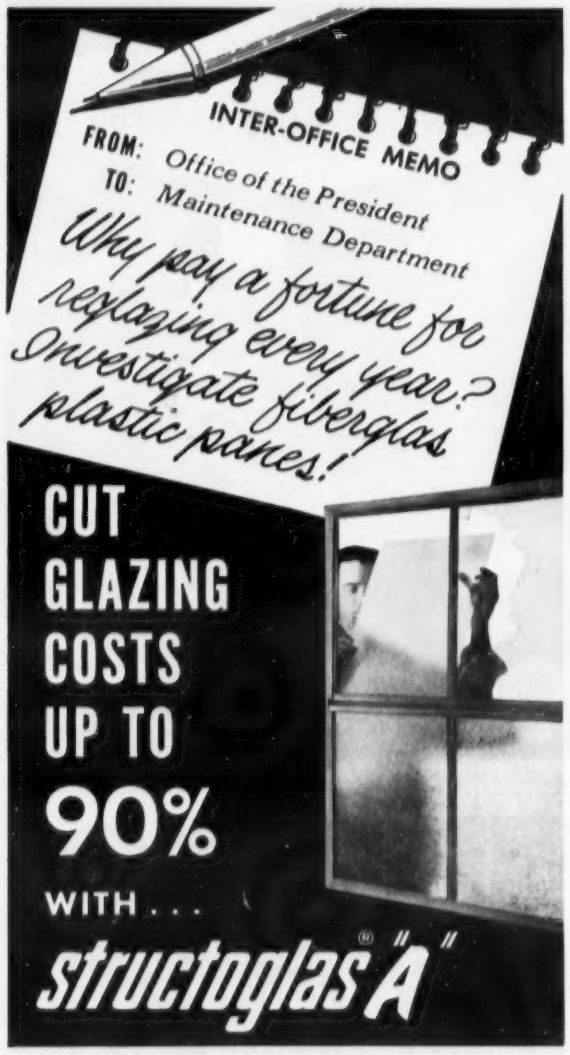
Effectively minimizes a long-prevalent basic weakness of centrifugal pump design. Self-adjusting to wear. Needs no external lubrication. Carbon stator/ceramic seat, unexcelled for long wear—or zircon filled Teflon / work-hardened Type 20 Stainless Steel, for severest corrosive service.

BART MANUFACTURING CORP.

ELECTROFORMING • PIPE LINING & COATING • PLATERS • PUMPS • ENGINEERING DESIGN SERVICES

229 Main St., Belleville 9, New Jersey

▲ For more details circle NED-753 J7 on enclosed inquiry slip ▲



First costs are usually **last costs** when you specify tough STRUCTOGLAS "A" fiberglas-reinforced panes that reduce normal window breakage by 90% or more. Here is a product which, through advanced chemistry, remains maintenance-free years longer than other "look-alike" products.

Frequent and costly window replacement is cut to an absolute minimum because STRUCTOGLAS "A" is both shatterproof and weatherproof . . . **stops** breakage caused by vibration, twisting, vandalism, and other common causes.

For replacement of **continuous top-hung sash**, or **ordinary factory sash**, STRUCTOGLAS "A" **panels** provide tremendous savings in materials, labor and future maintenance costs.

STRUCTOGLAS "A" is available in standard glazing sizes for fast, easy installation in the following gauges: Standard $\frac{1}{16}$", Special .080" and Heavy Duty $\frac{3}{16}$". Colors: Softlite Green, Skyline Blue and Crystal (clear translucent).

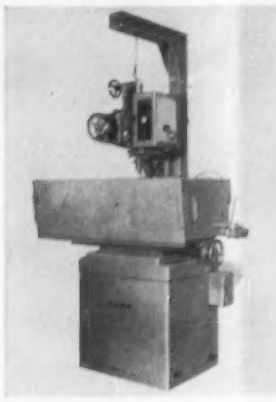
structoglas®
division of
international molded plastics, inc.
4307 west 35th street • cleveland 9, ohio 7607-1M

WRITE FOR BULLETIN SL-1 FOR COMPLETE DETAILS

▲ For more details circle NED-754 J7 on enclosed inquiry slip ▲

ELECTRONIC DIEING MACHINE

machines any hard or soft metal



Employing electronic disintegration principle to machine any metal regardless of hardness or density, this model M-501 18 x 43 DieMatic dieing machine is fully automatic. One man can operate two or more units. Dies are machined after heat treatment, thus avoiding chance of distortion. Forge dies can be reworked after washout without removing the entire cavity. Machined surface obtained normally improves die life. Cutting tools used are machined, forged or extruded brass or cast from Elo-Met low-temperature alloy. Machine has longitudinal travel on the table, cross-slide travel on the overarm, and vertical adjustment on the cross-slide assembly. High-volume pump fills the work-table pan quickly. Coolant filter is accessible for easy replacement. Power for the Elox machining process is supplied by a separate unit mounted on casters. Made by **Elox Corp. of Michigan,** Dept. NED, 1838 N. Stephenson Hwy., Royal Oak 3, Mich.

▲ For more details circle NED-755 J7 on enclosed inquiry slip ▲

TRACTOR LIFT

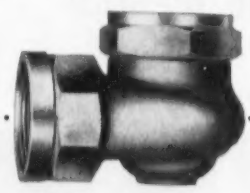
4000-lb capacity unit attaches to wheel and crawler models

Wheel and crawler models of International Harvester and John Deere tractors can be equipped with the Henry TL-4316 Tractor-Lift, a rear-mounted unit with 4000-lb capacity. It can perform lift truck type operations under adverse footing and traction conditions. Lift has a three-rail mast, which raises to a 16-ft lifting height and telescopes to a 93-in. retracted height.

Model TL-2310 has a three-rail lift, 10-ft raised height and 64-in. down height, and model TL-4210 has a two-rail mast, 10-ft lift and 87-in. down height. Rear mounting with operator reversed (illustrated) and front mounting are optional. Forks are offered with 36 and 42-in. tines. Also available are crane, dozer blade, bulk materials bucket and other attachments. Made by **Henry Mfg. Co.,** 1700 N. Clay St., Topeka, Kans.

▲ For more details circle NED-756 J7 on enclosed inquiry slip ▲

SPRAYING SYSTEMS CO.

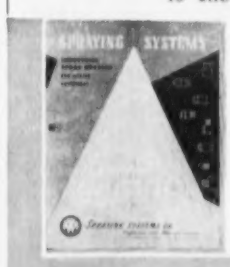


for lower cost

and better performance

SPRAY NOZZLES

Modern design. Precision machining. All materials. Thousands of standard industrial spray nozzle types and sizes to choose from. Years of proved experience at your service.



write for this great new catalog today

Ask for our new 48 page Catalog No. 24 . . . the most comprehensive spray nozzle catalog ever produced. Yours for the asking.

SPRAYING SYSTEMS CO.
3211 Randolph Street • Bellwood, Illinois

▲ For more details circle NED-757 J7 on enclosed inquiry slip ▲

WANT ASSURED MOTOR PERFORMANCE?

Send for bulletins on FAIRBANKS-MORSE MOTORS

featuring COPPERSPUN Rotors

Mechanical strength...superior electrical and thermal characteristics of F-M Copperspun Rotors give assurance of improved performance of motors on sustained, heavy-duty drives.

Exclusive F-M centrifugal casting produces a one-piece homogeneous rotor, free from flaws and gas inclusion—virtually indestructible. Write for bulletins on F-M motors equipped with Copperspun rotors.
Fairbanks, Morse & Co., Dept. NED-9, Chicago 5, Ill.

FAIRBANKS-MORSE
a name worth remembering when you want the BEST

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Tests tell the tale!

The extreme washroom efficiency provided by the combination of Turn-Towl's high absorption quality and controlled dispensing is proved in test after test being made around the country.

For example, here are figures showing the cost of towels used during a month-long test made by a Roanoke, Va., plant:

Towel No. 1	$49.88
Towel No. 2	$51.75
Mosinee Turn-Towls	**$31.88**

MOSINEE
Sulphate Towels
BAY WEST PAPER CO.
1130 West Mason Street
GREEN BAY • WISCONSIN
Subsidiary of Mosinee Paper Mills Co

Yes, it *pays* to get your washrooms under Turn-Towl control — with increased efficiency and welcome savings too.

Write for the name of your nearest Mosinee Turn-Towl distributor

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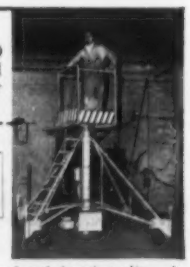
A NEW METHOD FOR WORKING AT HIGH LEVELS SAFELY...

BALLYMORE HYDRAULIC LIFT WORK PLATFORMS

Production and maintenance jobs are made easier, quicker and safer when you use Ballymore Hydraulic Lift Work Platforms. They provide a large, firm working area between 7 and 20 feet from the floor and can be used indoors or out.

Sturdily constructed of steel, the unit rolls easily on large, ball-bearing casters . . . accommodates up to 3 men. Complete stability is insured by levelizing jacks at each corner. The formed, expanded steel platform is raised by hydraulic power any height up to 15 feet. Write today for complete information.

MOBILE ACCESS LIFTS . . .
For difficult, hard-to-reach jobs up to 40 feet above ground level. Quickly positioned and elevated . . . safe . . . collapsible for easy portability. Write for details.



LOOK FOR THIS LABEL TO BE SURE IT'S THE BEST!

BALLYMORE COMPANY
WEST CHESTER, PA.

THE BALLYMORE COMPANY
WEST CHESTER 3, PA.

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What a sight!

CENTURY'S

All-new Oil Level Sight Gage

- No Easier Installation Ever Designed
- Better Visibility at any Height
- Leak-proof—No Dripping
- Streamlined Modern Appearance
- Important Savings in COST
- Available NOW From STOCK

Send for new catalog containing dimensional information on hydraulic reservoirs and complete line of power unit accessories.

CENTURY HYDRAULICS, INC.
7703 LYNDON AVE. • DETROIT 38, MICHIGAN
Telephone: Diamond 1-3797

For more details circle NED-761 J7 on enclosed inquiry slip

"ADJUSTABLE STROKE" MIDGET Air-Clamp® CYLINDER

Now—put pressure where it's wanted instantly and cheaply, with Mead's powerful new midget air cylinders (1" bore, single-acting, spring return—horizontal and vertical). Stroke is adjustable. Cut costs—use 'em singly or in groups to move, hold, press or eject small work pieces; to close and open large jigs, forms, fixtures. They'll replace human fingers and mechanical clamps in countless routine jobs.

Catalog Free!

Write for new fact-and-picture-packed Air Power Catalog—or ask your nearest Mead Man!

MEAD SPECIALTIES COMPANY
4114 N. Knox Ave., DEPT. NA-97
CHICAGO 41, ILLINOIS
PATHFINDER IN AIR POWER AUTOMATION

For more details circle NED-762 J7 on enclosed inquiry slip

New catalog simplifies selection and ordering of flexible metal hose and tubing

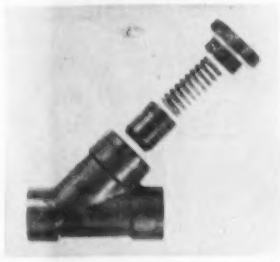
Describes basic types: corrugated, formed stripwound. Suggests correct installation methods. Information on: dimensions, weights, bending diameters, pressures, etc. Description and suggested uses of varied types in many metals: bronze, brass, aluminum, Monel, steel and stainless steel. Specifications on end fittings. Write for Catalog G-560. The American Brass Company, American Metal Hose Division, Waterbury 20, Conn. In Canada: The Canadian Fairbanks-Morse Company, Ltd. 56186

WHEREVER CONNECTORS MUST MOVE

AMERICAN flexible metal hose and tubing
an **ANACONDA**® product

For more details circle NED-763 J7 on enclosed inquiry slip

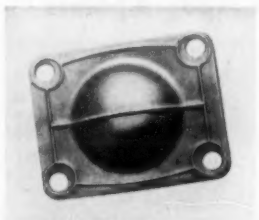
PLASTIC CHECK VALVE
has high corrosion resistance



Normal-impact rigid polyvinyl chloride used in this lift check valve provides corrosion resistance to alkalies, acids, inorganic salt solutions and other corrosives. A durable PVC spring positions the disk to assure complete shutoff. The all-plastic unit operates at pressures up to 150 psi at 75° F. It is available for ½ to 2-in. pipe with threaded, solvent-weld socket or flanged ends. Made by **Walworth Co.**, Dept. NED, 60 E. 42nd St., New York 17, N. Y.

For more details circle NED-764 J7 on enclosed inquiry slip

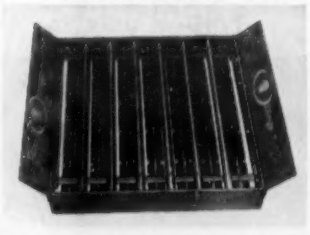
VALVE DIAPHRAGM
Teflon faces resist heat, corrosion



Sealing bead construction for positive closure under pressure or vacuum at operating temperatures from −10 to 240° F and for line pressures up to 150 psi is feature of Teflon-faced diaphragm for Hills-McCanna diaphragm valves. One piece diaphragm is made with chemical resistant Teflon sheeting permanently bonded to face and external edges of a flexible elastomeric backing. It provides corrosion protection from both internal flow and external atmospheric conditions. Made by **Hills-McCanna Co.**, 2455 W. Nelson St., Chicago 18, Ill.

For more details circle NED-765 J7 on enclosed inquiry slip

GRATE MAGNETS
remove tramp iron, fine particles



Line of permanent Alnico V grate magnets is used for removal of tramp iron and fine particles of "fuzz iron" from powders and granular material. Magnetic field is concentrated at the magnet surface, and particularly at the many sharp edges. An aluminum grid deflects the entire material flow into direct contact with the exposed magnets. Wing type grate magnets are used in, over or under steep-sloped or irregularly-shaped hoppers or floor openings. Drawer type protects against tramp iron in enclosed chutes or ducts. Both types are available in a wide range of sizes and shapes and are easily removed for cleaning. Made by **Dings Magnetic Separator Co.**, 4758 W. Electric Ave., Milwaukee 46, Wis.

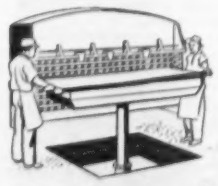
For more details circle NED-766 J7 on enclosed inquiry slip

Lift it the low-cost way
WITH DEPENDABLE HYDRAULIC POWER

Load trucks from floor level no dock needed

Move traffic from one floor level to another

Rotary Levelator Lifts, using dependable, economical oil-hydraulic power, have countless applications in modern industry. Capacities to 100,000 lbs. Standard models and special lifts engineered to your specifications. Write for catalog.



Feed machines, perform other industrial lifting jobs

Rotary® Levelator® Lifts
ROTARY LIFT COMPANY
Division of the Dover Corporation
1098 Kentucky, Memphis 2, Tenn. • Chatham, Ont.

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NEW 40-PAGE CATALOG

Tells how resistance welded fasteners cut costs, speed assembly and improve products. Gives typical applications and full dimensional information on 500 stock parts.

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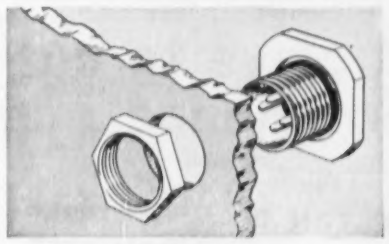

Bendix*

JAM NUT RECEPTACLES

permit maximum convenience in harness wiring

LOCKING OF JAM NUT RECEPTACLE IN PLACE

Jam nut receptacles are convenient to install, easy to service and to replace. Their use offers positive savings in harness assembly time. These receptacles permit easy bench wiring of harnesses and subassemblies prior to installation.

Just consider these design advantages: only one mounting hole required per receptacle; no extra gasket required; no user problem of sealing around screw holes; no extra hardware necessary, such as screws, washers or nuts. *TRADE MARK

Write for complete detailed specifications

Bendix
SCINTILLA DIVISION
SIDNEY, NEW YORK

Bendix AVIATION CORPORATION

Export Sales and Service: Bendix International Division
205 East 42nd Street, New York 17, N.Y.

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See how felt fits in with your products!

Let us show you how to save money and increase efficiency with the proper use of felt.

FREE Samples and Applications of Industrial Felt.

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CONTINENTAL FELT COMPANY, INC.
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WESTON functional range
VOLT-OHM-MILLIAMMETER

only $43.50

big value . . . ideal for maintenance and production testing. Broad range coverage as follows: D-C VOLTS: 1.6, 8, 40, 160, 400, 1600 (20,000 Ohms/Volt) A-C VOLTS: 1.6, 8, 40, 160, 400, 1600 (1,000 Ohms/Volt) DB RANGE: −15 db to +54 db (in six ranges) D-C MICROAMPERES: 80 – D-C MILLIAMPERES: 8, 80, 800 D-C AMPERES: 8

OHMS RANGE	CENTER SCALE	FULL SCALE
R x 1	25	1,000
R x 10	250	10,000
R x 100	2,500	100,000
R x 1,000	25,000	1 megohm
R x 10,000	250,000	10 megohms

Accuracy 2% d-c, 3% a-c—Scale length 4.63"—size 6¼"x7½"x3¼"

WESTON
miniature clamp
VOLT-AMMETER

only $40.50

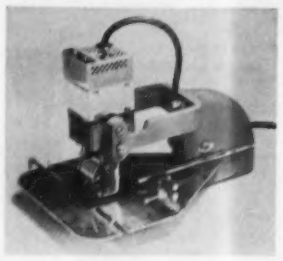
the most convenient tool for quick, efficient maintenance. Only one easily read scale for all ranges and functions. Has rugged, shock-mounted self shielded mechanism with spring back jewels. Carefully selected ranges include – a-c current, 300/150/60/15/6 amperes; a-c volts, 600/300/150. Supplied in sturdy, scuffproof case. Plug-in adapter available for low current circuit measurements and current measurements of meters, appliances and circuits.

—for complete data on all Weston instruments for maintenance and production requirements, write Weston Electrical Instrument Corp., 617 Frelinghuysen Avenue, Newark 12, N.J. A subsidiary of Daystrom, Inc.

WESTON INSTRUMENTS

For more details circle NED-772 J7 on enclosed inquiry slip

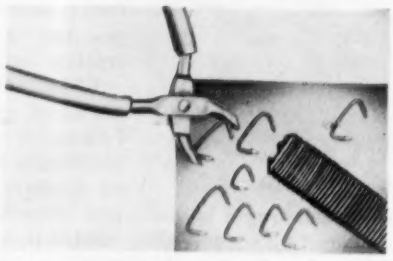
ELECTRIC NUMBERING MACHINE
prints sequence numbers to 6 digits



Cards, tags, labels, up to 10 carbon forms and other items are automatically imprinted with numbers in sequence from 1 to 999,999 by this electric numbering machine. It also offers choice of consecutive, duplicate or repeat operation. Universal head can be set to number toward front, back, left or right at any point on a 12-in. wide sheet of any length. Hand or foot control is optional on this machine which plugs into any electric outlet. Made by **Heller Roberts Mfg. Corp.**, Dept. A, 700 Jamaica Ave., Brooklyn 8, N. Y.

For more details circle NED-773 J7 on enclosed inquiry slip

HOG RINGS & PLIERS
rings close with no exposed points



Available in bulk or on precounted strips, these hog rings close without exposed points, and their overlapping legs are clinched tight. Rings in five sizes range from 3/8 to 7/8-in. ID open. Installation pliers in four models include the midget, angled nose and spring-grip types. Made by **Republic Fastener Products Corp.**, 43-11 Crescent St., Long Island City 1, N. Y.

For more details circle NED-774 J7 on enclosed inquiry slip

TINY COMPOSITION RESISTOR
1/10-w unit for small assemblies

Added to line of ½, 1 and 2-w Little Devil molded composition resistors is this 1/10-w size. Resistors have 0.067-in. diameter and 0.140-in. length, and are intended for use in miniaturized assemblies. Lead wires are molded solidly into resistance material for good electrical connection. Wires are hot solder-coated. RETMA values range from 100 ohms to 1.0 megohm, ±10 per cent tolerance. Made by **Ohmite Mfg. Co.**, 3629 Howard St., Skokie, Ill.

For more details circle NED-775 J7 on enclosed inquiry slip

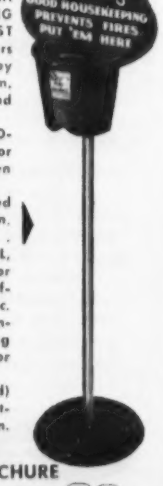
CIGARS-CIGARETTES-MATCHES
immediately extinguished... with
SIPCO DUNKING STATIONS

Fire hazards from smoking are a problem everywhere.

Stop fires before they start . . . with SIPCO DUNKING STATIONS. Heavy CAST ALUMINUM CANISTERS—guaranteed three years against breakage. Partly filled with water, they drown the "smoke" and solve the sanitation problem. Lift off the canister—flip back the lid—dump it and the cleaning job is done!

Available in over a dozen different models. STANDARD and JUMBO sizes—with either black crinkle or brightly polished DELUXE finish to suit your own requirements.

Unit No. 1J—JUMBO floor model with heavy weighted base and attractive, eye catching metal sign. Height 42". Wt. 26 lbs. ALSO AVAILABLE . . .



A DELUXE FLOOR MODEL, LESS SIGN AND DECAL, for hospitals, waiting rooms, offices, restaurants, stores, etc.

Unit No. 2J—JUMBO canister and sign. For mounting on walls, posts, columns or machines. Wt. 6 lbs.

Unit No. 3J—(not illustrated) JUMBO canister with mounting bracket but less sign. Wt. 3½ lbs.

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DEPT. D • 920 N. GARFIELD AVE. • PEORIA, ILLINOIS

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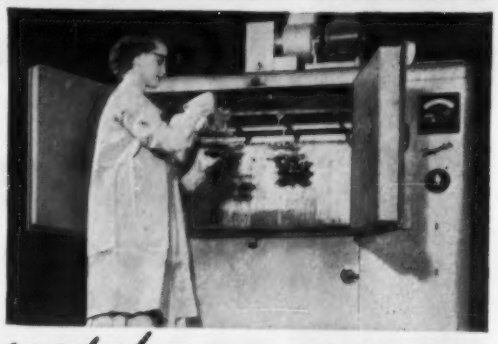

Despatch LAB OVENS
put to production use

TELEX, INC., St. Paul, is doing a lot of encapsulation work these days—and Despatch Laboratory Ovens have become an important production tool. In the manufacture of many items, the components and finished assemblies must undergo extreme tests for temperature and humidity. So, to absorb the shock, components are pre-encapsulated in foam plastic then air dried and heat cured at close temperature tolerance to meet rigid specifications.

Telex particularly likes the Despatch "Whirlblast" forced air convection system, so essential in this operation. And the ability of the ovens to maintain an exact temperature is an "absolute" in the Telex quality control system. For information on how Despatch Laboratory ovens can work into your production setup, *write for Bulletin No. 100.*

Manufacturers of ovens for DEHYDRATING . . . CURING . . . PAINT FINISHING . . . ALL INDUSTRIAL AND LABORATORY APPLICATIONS.

DESPATCH OVEN CO. Established 1907
DESPATCH OVEN COMPANY
325 Despatch Bldg. • Minneapolis 14, Minn.

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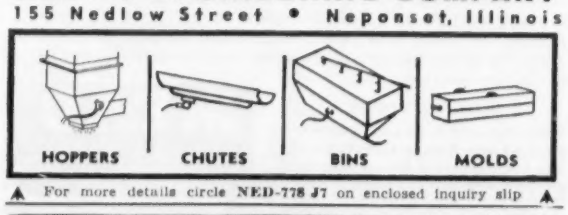
VIBROLATOR®

the strong silent type VIBRATOR

FOR MOVEMENT OF WET OR DRY MATERIAL

Only one moving part does the job — a rolling ball driven by compressed air or steam. Needs no oil or filters. The VIBROLATOR moves materials down chutes, out of bins and hoppers, actuates screens, brings up entrained air in wet plaster, concrete and granulars. Priced from $9 to $88 in malleable iron, (nonferrous in some sizes), from "pocket-watch" size to the 10 lb. DV-51. Write for complete catalog today.

MARTIN ENGINEERING COMPANY
155 Nedlow Street • Neponset, Illinois



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Colonial Develops
SPECIAL RUBBERS

FOR Tough INDUSTRIAL APPLICATIONS

CONSULT OUR ENGINEERS ON YOUR RUBBER PARTS PROBLEMS AT NO OBLIGATION

The Colonial Rubber Company has the experience, the technical staff, and the facilities to meet your *special* requirements in industrial rubber parts. Our service is fast, efficient and precise for three important reasons:

Colonial Operates Its Own
- RUBBER RESEARCH LABORATORIES
- DIE-MAKING MACHINE SHOP
- PARTS PRODUCTION PLANT

Send for Free Illustrated Booklet
Contains complete details on Colonial's custom rubber compounding and molding . . . shows *why* manufacturers can use this service to advantage.

2300

Colonial Rubber Co.
Ravenna, Ohio

For more details circle NED-779 J7 on enclosed inquiry slip

NEW pocket size thickness gauge

ELCOMETER

Measures Non-Magnetic Coatings with ± 5% ± .0001" Accuracy

ELCOMETER measures thickness of porcelain enamel, paints, platings, foils, glass, paper, plastics, and other non-magnetic coatings quickly and accurately. Gauges flat or curved surfaces and hard-to-get-at spots easily. Needle locking device assures correct reading every time. Complete with tough leather case containing inner pocket for test strips. Weighs only 6 oz. Completely self-contained. Retail price: $68.00, F. O. B. Cleveland.

FERRO

WRITE FOR ILLUSTRATED FOLDER

FERRO CORPORATION

4181 East 56th St. • Cleveland 5, Ohio

For more details circle NED-780 J7 on enclosed inquiry slip

NEW DRY CHEMICAL EXTINGUISHER ...FASTEST WAY TO KILL FIRE!

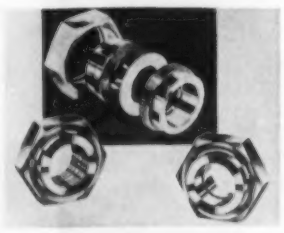
Here from Kidde is the newest, the fastest, the easiest-to-operate pressurized dry chemical fire extinguisher. Exciting new features include: extra-large aluminum handle (operates with gloves on); center-balanced (easier to carry); recessed pressure gauge (tells if a unit is charged, ready for use); simplified operation and instructions . . . "Remove Horn" (automatically releases trigger safety lock), "Pull Trigger" (instantly dry chemical whooshes out, kills fire). Comes in 20 and 30 pound capacities. UL-approved. Requires only 225-250 psi charging pressure. Write Kidde today for name of nearest distributor.

Kidde

Walter Kidde & Company, Inc.
924 Main St., Belleville 9, N. J.
Walter Kidde & Company of Canada Ltd., Montreal — Toronto

For more details circle NED-781 J7 on enclosed inquiry slip

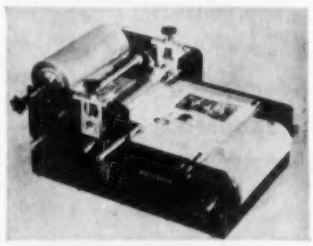
STAINLESS PIPE UNION gasket face is serrated



A serrated face is provided in this Speedline union for the gasket material of the user's choice. Union is used with light wall schedules 5 and 10 stainless pipe. Bimetallic construction of stainless steel ferrules and cadmium plated carbon steel nut provides a union joint that can be made up and broken many times without galling. Expanding types in ½ through 1½ in. sizes and welding or brazing types in ½ through 2-in. sizes are available. Made by **Horace T. Potts Co.**, Speedline Div., Dept. NED, 504 Erie Ave., Philadelphia 34, Pa.

For more details circle NED-783 J7 on enclosed inquiry slip

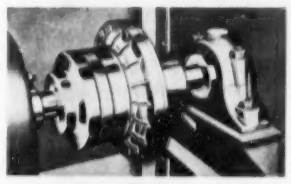
LAMINATING MACHINE applies plastic film to drawings



Acetate and other protective plastic films are applied to book covers, displays, drawings, photocopies, charts, badges and similar paper items by this Rotobond laminating machine. Machine uses inexpensive uncoated films in thicknesses from 0.001-in. up and laminates without the use of heat or solvents. It can be placed on a small office table or its own stand and will laminate sheets as fast as they are fed into it by the operator. Made by **Rotobond Co.**, Box 69-D, Bound Brook, N. J.

For more details circle NED-784 J7 on enclosed inquiry slip

DRY FLUID DRIVES & COUPLINGS now available for motors up to 75 hp



Flexidyne dry fluid drives and couplings (*NED, Apr.* '55) which use heat treated steel shot as the "fluid" are now available in larger sizes for handling motors rated up to 75 hp at 1750 rpm. They are available as No. 15D drive for V-belt drive from motor to load and No. 15C coupling for direct shaft-to-shaft connection. Standard starting torques of these units can be increased from rated full-load motor torque by increasing the weight of the flow charge of "fluid." Maximum bore sizes are 3 in. for the coupling and 2⅜ in. for the drive. Coupling weighs 134 lb and the drive weighs 100 lb. Both can be used with electric motors and gas or diesel engines. Made by **Dodge Mfg. Corp.**, 600 S. Union St., Mishawaka, Ind.

For more details circle NED-785 J7 on enclosed inquiry slip

OPW

One Look to Know!

visi-flo

OPW VISI-FLO sight glass indicators are a trustworthy visible means of alerting you as to rate of flow, viscosity, color of liquids, clarity, and purity of product.

OPW VISI-FLO protects you against line stoppage, helps maintain uniformity, a high standard of product quality and an even continuity of production.

Write

Write for free Bulletin F-6 describing complete VISI-FLO line, from plain types to magnetic indicating types.

JORDAN CORPORATION | 6013 WIEHE ROAD CINCINNATI 13, OHIO
INDUSTRIAL SALES DIVISION OF OPW CORP.

For more details circle NED-786 J7 on enclosed inquiry slip

ALCOA ABRASIVE TREAD PLATE

safest surface in your plant!

The tough particles that make a grindstone cut metal make it the safest of all surfaces for walking.

Alcoa, the nation's leading supplier of fused aluminum oxide for grinding wheels, is now making an aluminum tread plate from this identical material. By rolling these sharp abrasive particles into strong, light, rustproof aluminum, Alcoa offers a surface on which men can safely stand or work under almost any conditions. It stays slip-proof even when wet, oily or greasy. Since the abrasive is rolled in, its slip-proof qualities are more than surface deep!

If your plant contributes to the 20,000 deaths by falls that occur each year, or to the thousands of injuries, here's a way to stop them: install Alcoa® Abrasive Aluminum Tread Plate on catwalks, stairways, walkways, pedestrian lanes . . . wherever men work or walk . . . wherever surfaces get slippery.

Measured by the cost of even a single injury, the cost is trifling. For sample and complete data, use the coupon below. Aluminum Company of America, 1668-F Alcoa Bldg., Pittsburgh 19, Pa.

Your Guide to the Best in Aluminum Value

THE ALCOA HOUR— Television's Finest Live Drama, Alternate Sunday Evenings

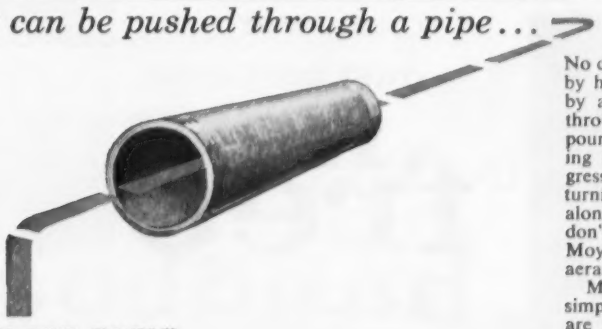
Aluminum Company of America
1668-J Alcoa Bldg.
Pittsburgh 19, Pa.

Please send literature and four-inch sample of abrasive tread plate.

Name and Title .....
Company .....
Use Being Considered .....
Address .....
City and State .....

For more details circle NED-787 J7 on enclosed inquiry slip

if it can be pushed through a pipe . . .



you can pump it with a

MOYNO®

No doubt, in your plant, certain materials are being moved by hand expensively that could be pumped economically by a Moyno. They pump anything that can be forced through a pipe . . . from very thin liquids to heavy, non-pourable abrasive substances . . . even materials containing suspended particles! As the illustration shows, progressing cavities, formed by the helical screw-like rotor turning inside the double-helical stator, move smoothly along, carrying the material with them . . . the cavities don't squeeze the substance . . . can't stick or gum up. Moyno pumps will not cause churning, foaming . . . won't aerate or vapor-lock!

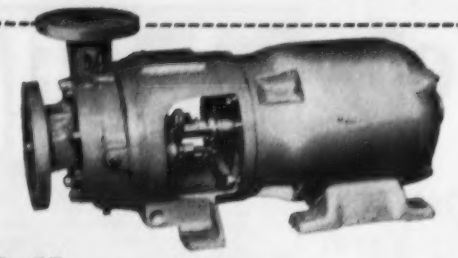
Moynos are adaptable for a wide range of substances simply by modifying the materials the pumping elements are made of. They are available to pull up to 29" of vacuum while discharging under pressure. If you have a pumping problem, chances are a Moyno will solve it!

Look in the yellow pages for the name of your nearest R & M Moyno Pump representative, or write today, for Bulletin 30-NE.

Industrial type Moyno . . . available to 500 gpm, pressures to 1000 psi

ROBBINS & MYERS, INC.
SPRINGFIELD, OHIO / BRANTFORD, ONTARIO

For more details circle NED-782 J7 on enclosed inquiry slip



full capacity pumping power

There's maximum performance with space-saving compactness in the design of Ingersoll-Rand's Motorpump. Capacities from 5 to 2800 gpm . . . heads to 650 feet. Easy installation. Precision manufacturing means dependable, smooth operation.

For your liquid-moving problems . . . Send for I-R's catalog on Motorpumps.

Ingersoll-Rand
11 Broadway, New York 4, N.Y.

9-498

For more details circle NED-788 J7 on enclosed inquiry slip

Sensitive hand and geared power feed. 1 hp. motor, 1800 or 1500 rpm. 1½" drilling capacity in cast iron.

Appearance, design and *price* will tell you here is an outstanding drill buy. Its performance will *prove* it!

This new Cincinnati gives you eight easy-to-change spindle speeds; accurately ground, alloy steel No. 4 Morse taper spindle; 10½" of spindle travel; big diameter column for maximum stability; complete belt and gear guarding for extra safety.

Shipped complete with motor and built-in controls; you simply connect shop power leads and you're ready to drill. Send for Catalog D-142, or see your CL&T dealer. Cincinnati Lathe and Tool Co., 3207 Disney St., Cincinnati 9, Ohio.

Builders of Engine, Toolroom and Fixed Gap Bed Lathes and Complete Line of Drilling Machines

center on **cincinnati lathes and drills**

For more details circle NED-789 J7 on enclosed inquiry slip

ELECTRONIC GAGE covers range of 0.01 to 0.0002-in.

This Versachek is an electronically operated gage that converts minute dimensional variations to voltage changes and amplifies them to be read on a large meter with widely spaced graduations. It consists of an electronic amplifier and a pickup head, mounted on either a height gage stand or a comparator stand. Gaging is accomplished by setting the head to a specific dimension with gage blocks or other suitable master and comparing the actual product dimensions. Variance from the master is read on the meter scale. Magnifications of 400:1, 2000:1, 4000:1 and 20,000:1 are selected by a switch on the front panel. Connecting cables between pickup and meter can be any length, and accuracy is unaffected by voltage fluctuations. Made by **Taft-Peirce Mfg. Co.**, 11 Mechanic Ave., Woonsocket, R. I.

For more details circle NED-790 J7 on enclosed inquiry slip

LP-GAS POWERED SWEEPER safe to use in congested areas

Designed for use in confined factory areas, food plants and warehouses, this model 50-LP power sweeper has a UL-approved LP-gas fuel system. Noxious exhaust fumes are held to a minimum, long engine life is assured and operation is economical. A 14-lb pressurized LP-gas cylinder is used, and safety features include a vacuum lockoff and a solenoid valve which shuts off fuel flow when the ignition is turned off. Automotive steering, dual front wheel drive and compactness for narrow-aisle use are features of this machine that has a 28-in. main brush and covers a 40-in. path with an optional sidebrush. Made by **G. H. Tennant Co.**, 721 N. Lilac Dr., Minneapolis 22, Minn.

For more details circle NED-791 J7 on enclosed inquiry slip

Designers' Guide to Instruments

Trio Laboratories, Inc.—Pictures, outline drawings, descriptions, theory of operation, mounting details and complete specifications on an entire line of miniature panel-mounting electronic instruments comprise 36-page catalog and designers' guide. Types of meters are available for military, industrial, aviation and other purposes.

For more details circle NED-792 J7 on enclosed inquiry slip

You can expect extremely long life from Skinner Solenoid Valves. Here's why . . .

In the lab above, dozens of Skinner valves are life-cycled 24 hours a day, seven days a week, at speeds as high as 600 cycles. It is here we test welded joint stability . . . coil burnout resistance . . . spring return effectiveness . . . the seal we obtain without packings. And it's here we find proof of Skinner valves getting over 20,000,000 cycles without leakage.

For complete information on Skinner's line of 2-, 3- and 4-way valves, contact a Skinner representative or write us at Dept. 439.

Skinner Solenoid Valves are distributed nationally

SKINNER ELECTRIC VALVE DIVISION NEW BRITAIN CONNECTICUT

For more details circle NED-793 J7 on enclosed inquiry slip

GET THIS BRAND-NEW CATALOG ON NICKEL ALLOY TUBING

FREE!

Here is the complete story on nickel alloy tubing in a 20-page booklet that provides quick, convenient reference for design engineers. Vital data on nickel and nickel alloys—including advantages, uses, chemical and mechanical properties, available sizes, and how to select proper tubing for a given application.

Nickel alloy tubing produced by Superior normally falls within the size range of .010" to ⅜" OD. Some alloys are also available ranging as high as 2½" OD x .025" wall. High-strength nickel alloys are hard and ductile. They offer designers and manufacturers high corrosion and heat resistance, plus good fabricating quality and excellent physical properties at elevated temperatures.

FOR YOUR FREE COPY OF CATALOG 12, WRITE TO

Superior Tube
The big name in small tubing
2018 Germantown Ave., Norristown, Pa.

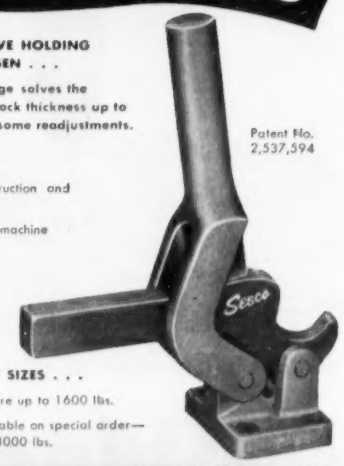
All analyses .010" to ¾" OD—Certain analyses in light walls up to 2½" OD

For more details circle NED-794 J7 on enclosed inquiry slip

Sesco positive holding CAM CLAMPS

THEY MAINTAIN POSITIVE HOLDING PRESSURE—NEVER LOOSEN . . .

The effective clamping range solves the problem of variations in stock thickness up to ¼" and eliminates troublesome readjustments.



Patent No. 2,537,594

LAST INDEFINITELY . . .

→ because of heavy steel construction and precision assembly.

→ singly, or in multiple, on any machine tool, or operation.

→ and withstands severe vibrations, even on milling operations.

AND, THEY'RE AVAILABLE FROM STOCK IN 4 STANDARD SIZES . . .

→ with maximum holding pressure up to 1600 lbs.

→ and, 2 larger sizes are available on special order—with holding pressure up to 8000 lbs.

SESCO INC. 8881 Central Detroit 4, Michigan

For more details circle NED-795 J7 on enclosed inquiry slip

to answer your dust problems

new free handbook

details on how you can cut costs, up employee morale with flexible, economical unitized *dust collectors*

Here's a 28-page, fully illustrated manual of up-to-date dust control information. You'll find it loaded with useful facts, figures, charts, applications and other valuable information. Contains details on all the portable, self-contained Torit Dust Collectors—their use, flexibility and economy. Includes complete specifications on the broad range of Torit types and models.

Your copy FREE by writing:

TORIT MANUFACTURING COMPANY
311 Walnut Street
St. Paul 2, Minnesota, Dept. 203

For more details circle NED-796 J7 on enclosed inquiry slip

NEW... SPRAY

BELT DRESSING
is easy to apply—no waste!

More for your money! The convenient NEW aerosol CLING-SURFACE dispenser makes it EASY to apply to multiple V-Belt drives; to leather, rubber covered and hair belts. Here's the convenient, easy, on-the-job way to apply the BEST Belt Dressing made. There's no waste.

33% MORE BELT DRESSING

gives up to 5 times the "mileage". Guarantees slip-free operation for all belts. Lasts up to 5 times longer than other spray dressings. Keeps belts pliable, moisture proof. A very little goes a long way. CLING-SURFACE is the ECONOMICAL Belt Dressing.

Write for our generous trial offer

CLING-SURFACE CO.
1045 NIAGARA ST. • BUFFALO, NEW YORK

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NAMEPLATE DECALS

If you have adhesive problems with the water applied decals you are now using...switch to NEW MEYERCORD TYPE I

This is BIG NEWS about a new addition to the Meyercord "family" of commercial nameplate decals! Meyercord has perfected a completely new water applied decal nameplate with revolutionary advantages. This new TYPE I Decal instantly grips virtually any commercial surface with bulldog tenacity. It will cling and adhere with ease to acrylics, metal (painted or unpainted), melamines, polyethylenes . . . to mention only a few of the more difficult. Type I decals are applied with all the usual ease of any water applied decal but they do not depend upon water solubility for adhesion. Even if oversoaked for long periods there is no damage or adverse effect on the adhesion. TYPE I Decal Nameplates can be designed to include colorful halftones as well as plain poster-style designs. However, for the present, this new TYPE I Decal can be manufactured in production line quantities only. Let us prove that TYPE I can be the answer to the most stubborn nameplate problem. Send sample of surface and material—for samples and full information. No obligation, of course.

FREE! "MARK-IT" MANUAL OF DECAL NAMEPLATES

Send today, on your company letterhead, for this valuable full-color guide to every industrial problem in marking, identification, instruction, and information. Gives you hundreds of new ideas for the application of decals to your products.

THE MEYERCORD CO.
World's Largest Decalcomania Manufacturer
DEPT. L-316, 5323 WEST LAKE STREET • CHICAGO 44, ILLINOIS

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New Processes and Materials

PENETRATING OIL in self-spray can

Aerosol dispenser for Dependable penetrating oil enables a fine stream of oil to be directed at hard-to-get places. Oil has molybdenum disulfide additive, plus DPX No. 16. The 16-oz can, which lists for $1.98, is easy to handle. Oil is delivered where it is needed with little waste. Offered by **W. J. Ruscoe Co.,** 485 Kenmore Blvd., Akron 1, O.

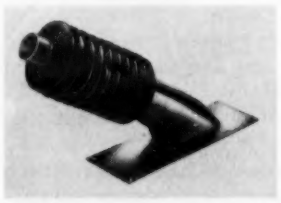
▲ For more details circle NED-799 J7 on enclosed inquiry slip ▲

NICKEL STRIPPER for all common metals

Rapid, economical stripping of nickel from such metals as steel, copper and brass is possible with Ni-Plex stripper. It is a noncaustic product, does not fume and is stable over long periods of time at elevated temperatures. Effective on all types of die castings, it will not pit or corrode the basis metal. Two solutions are mixed and diluted to proper strength for the stripping bath, operated at room temperature to 80° F at a pH of 7 to 11. One gallon will strip 43¼ sq ft of 0.0001-in. nickel plate. Made by **United Chemical Corp. of New England,** Dept. NED, 45 Seekonk St., Providence 6, R. I.

▲ For more details circle NED-800 J7 on enclosed inquiry slip ▲

SILICONE-COATED MATERIAL made into boots, sleeves, way-guards



Combining the mechanical strength of glass fabric with the durability and heat resistance of silicone, new coated sheet stock is being fabricated as boots, sleeves, way-guards and other protective fabric products. This material withstands temperatures from −80° to 450° F without cracking, and resists oil, other liquids and vapors. Fabricated into pliable parts of practically any size, shape and contour with treated cord, this lightweight 0.032-in. material will take the rapid flexing encountered on delicate instruments as well as pulling pressures up to 600 psi on heavy press rams, steel mill turn downs and machine tool ways. Illustration shows flexible gear case cover for take-off shaft of oscillating arm. Made by **A & A Mfg. Co.,** 712 S. Twelfth St., Milwaukee 4, Wis.

▲ For more details circle NED-801 J7 on enclosed inquiry slip ▲

GRIEVE-HENDRY PORTABLE ELECTRIC OVENS...

Standard Models For Every Special Need!

Model CR-1
10 cu. ft. capacity—30" wide x 25" deep x 24" high. Removable shelves and drip pan. . . . . $110.50 f.o.b. Chicago

Portable. Costs less than 5¢ per hour to operate. Adjustable temperature control to 225° F. Fan driven forced air circulation. Uniform temperature throughout. Plugs into any 110V wall outlet—no special wiring required.

Quick Quotations —Prompt Delivery — Reasonable Prices—on Ovens made to your specifications.

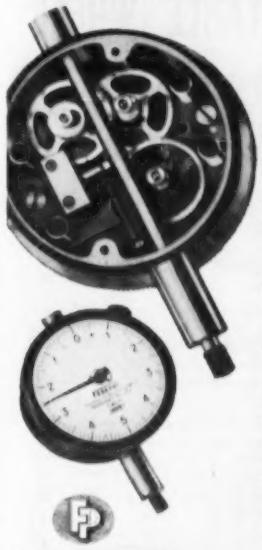
Can be used in a group or bank. Use them on the production line —save handling—hauling.

Other standard models with temperature ranges to 1000° F. available. Write for literature.

GRIEVE-HENDRY CO., INC.
1408 W. Carroll Ave., Chicago 7, Ill.
Export Dept. 10406 S. Western Ave., Chicago 43, Illinois

▲ For more details circle NED-802 J7 on enclosed inquiry slip ▲

TRUSTWORTHY



DESIGN . . . Regular precision bearings are good, but Federal introduced *Jeweled Bearings* which are virtually frictionless and retain their precision longer. A movement integral with the Indicator case is good, but Federal devised the Unit Movement which permits much greater assembly accuracy. The conventional indicating hand is good, but Federal's *dynamically balanced hand* reduces inertia and puts less stress on the movement. And so on . . . through Cushion Movement, Hardened Gears, Wetproof and other design advances, each pioneered by Federal.

PERFORMANCE . . . All Dial Indicators must meet established standards. Federal Dial Indicators must EXCEED them. Closer tolerances at critical points . . . extra steps in production . . . more critical inspection . . . all contribute to the highest quality. In short, better habits of production provide that margin of excellence beyond mere acceptance. This is why more Federal Dial Indicators are used than all others combined.

PRICE . . . Federal Dial Indicators are generally *lower* in price than competitive makes. Lower than standard prices for a better product are only possible through the large volume demand generated by industry's wide *preference* and the economies of manufacturing efficiency. The sum total significance to you is . . . Federal Dial Indicators are a better investment.

See the most extensive line of Dial Indicators in Catalog 55.

FEDERAL PRODUCTS CORPORATION
7179 Eddy Street, Providence 1, R. I.

Ask **FEDERAL** *First*
FOR RECOMMENDATIONS IN MODERN GAGES . . .
DIAL INDICATING, AIR, ELECTRIC, OR ELECTRONIC—FOR INSPECTING, MEASURING, SORTING, OR AUTOMATION GAGING

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TORQUE
applied by the inch ounce

Available in these Torque Ranges

MODEL	CAPACITY
F80-I-G	0- 80 inch grams
F8-I-O	0- 8 inch ounces
F16-I-O	0- 16 inch ounces
F32-I-O	0- 32 inch ounces
F80-I-O	0- 80 inch ounces
F160-I-O	0-160 inch ounces

Inch pound models and larger foot pound ranges also available

sent on request

P.A. STURTEVANT CO.
ADDISON QUALITY ILLINOIS

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Production shops report CLAUSING 12¾" lathes best in their capacity and price range

Users get exceptional performance on production, tool room, maintenance, and laboratory work because of advanced and exclusive features. New flame hardened bed ways, for example, are standard equipment. New heavy-duty 10-speed countershaft spins on six ball bearings and has clutch and brake for instant stopping. Fully enclosed headstock with all moving parts running in *pumped oil bath.* Forged, precision-ground 1⅝" bore spindle turns on *"Zero-Precision" Timken tapered roller bearings.* Tapered key-locked type L-00 spindle is hardened and ground. Quick-change mechanism permits instant selection of 54 threads, feeds. Mechanism gears and shafts run in bath of oil. Each lathe must pass these rigid tolerance tests:

1. Spindle Nose Runout, total indicator reading ..... 0 to .0003"
2. Spindle Taper Runout, at end of 12" test bar ..... 0 to .0006"
3. Headstock Alignment (horizontal) at end of 12" test bar ..... 0 to ± .0003"
4. Tailstock Spindle Alignment (vertical) high at end of spindle when fully extended ..... 0 to .0008"
5. With work mounted in chuck, lathe must turn round within ..... 0 to .0003"

See the new CLAUSING at your nearest Atlas-CLAUSING dealer's before you decide on *any* lathe. Write for catalog TODAY!

CLAUSING DIVISION, ATLAS PRESS COMPANY
9-113 N. PITCHER ST. • KALAMAZOO, MICHIGAN

▲ For more details circle NED-805 J7 on enclosed inquiry slip ▲

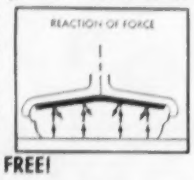
NEW Rapistan® DEMOUNTABLE WHEEL

now in wide range of sizes

OUT-WEARS MOLDED-ON TIRES-CUTS COSTS 65%

You get 50% longer life from Rapistan MB DEMOUNTABLE WHEELS. You cut costs, because MB tires are replaceable — in 3 to 5 minutes, and cost far less than new wheels or re-molding tires.

The secret of Rapistan MB Wheel's long life is in the exclusive V-shaped steel tire backing. Load force is deflected toward the center of the tire, keeping rubber firm and dense, minimizing bulging and "chunking out," reducing friction and wear.



Available in 6", 8" and 10" dia. Watch for new 3" tread size in 10" dia. for high capacity use.

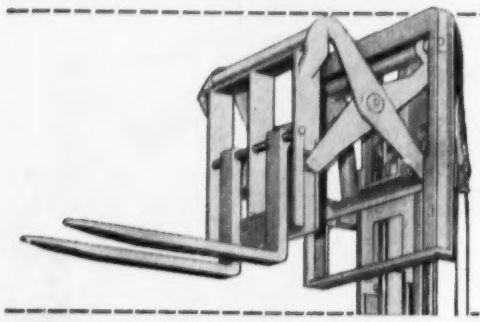
Write for New Bulletin MB-57 — FREE!

Rapistan — fastest growing name in casters

The RAPIDS-STANDARD CO. INCORPORATED
103 Rapistan Bldg.
Grand Rapids 2, Michigan

For more details circle NED-806 J7 on enclosed inquiry slip

6 FT. AISLES Now you can have them . . .



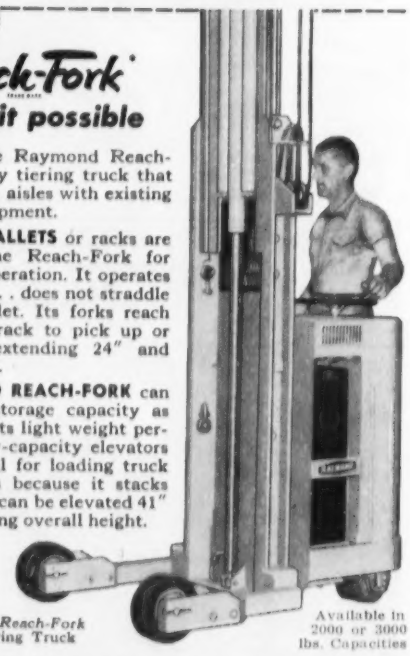
without obsoleting your present racks or pallets

RAYMOND Reach-Fork makes it possible

IT'S TRUE! The Raymond Reach-Fork is the only tiering truck that operates in 6-ft. aisles with existing warehouse equipment.

NO SPECIAL PALLETS or racks are required by the Reach-Fork for close-quarter operation. It operates from the aisle . . . does not straddle the bottom pallet. Its forks reach right into the rack to pick up or deposit load, extending 24" and back in seconds.

THE RAYMOND REACH-FORK can increase your storage capacity as much as 50%. Its light weight permits use on low-capacity elevators and floors. Ideal for loading truck trailers, boxcars because it stacks pallets closely—can be elevated 41" without increasing overall height.



RAYMOND Reach-Fork Electric Tiering Truck

Available in 2000 or 3000 lbs. Capacities

Reach-Fork is equipped with new Raymond power unit that opens like a book for fast, easy servicing. All parts housed behind hinged double doors . . . nothing under unit to inspect but the wheels. * PATENT NO. 2,864,002

RAYMOND

ELECTRIC INDUSTRIAL TRUCKS HYDRAULIC ELEVATING EQUIPMENT

MAIL COUPON TODAY

The RAYMOND CORPORATION
4135 Madison St., Greene, N.Y.

( ) Please send me latest Reach-Fork Bulletin.
( ) Please have your representative call.

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

For more details circle NED-807 J7 on enclosed inquiry slip

New Literature and Catalogs

Photographic Equipment

Burke & James, Inc.—The 59th annual Photo Catalog of this company contains 104 illustrated pages of cameras of all types, dryers for prints and negatives, enlargers, lenses, printers, darkroom equipment, screens, tape recorders, viewers, projectors and many other related photographic products for commercial and industrial use.

For more details circle NED-808 J7 on enclosed inquiry slip

Nonmetallic Pipe & Tubing

Fibercast Corp.—Two illustrated bulletins describe what Fibercast line pipe and well tubing is and how it is made. They also present complete application data and prices on this braided glass fiber reinforced, centrifugally cast, thermoset epoxy resin pipe. Resistant to corrosives, temperatures to 260° F, and pressures to 500 psi, pipe is offered in 2⅜ to 3½-in. sizes.

For more details circle NED-809 J7 on enclosed inquiry slip

Dynamic & Static Seals

Acadia Synthetic Products—Lathe cut static and dynamic seals which can be used in standard O-ring grooves are described and illustrated in 4-page folder. Made from various polymers for many applications, seals are available from ½-in. ID minimum to 25-in. OD maximum, with minimum thickness of cut of 1/32 in. Specifications and diagrams of all types are included.

For more details circle NED-810 J7 on enclosed inquiry slip

Optical Equipment

Edmund Scientific Co.—Technical data and factual information on many types of optical instruments and components are found in 72-page catalog. Included are quality control tools, magnifiers, microscopes, pocket comparators, lenses, prisms, spectroscopes, reticles, binoculars and telescopes.

For more details circle NED-811 J7 on enclosed inquiry slip

Investment Castings

Alloy Precision Castings Co.—Series of brochures contains case histories of investment casting applications, with castings produced by frozen mercury and lost wax processes. Company produces 1/10-oz to 100-lb castings in practically all castable metals. Design information is included.

For more details circle NED-812 J7 on enclosed inquiry slip

Industrial Lift Trucks

Yale & Towne Mfg. Co., Yale Materials Handling Div.—G-3 series of 15,000 to 20,000-lb capacity industrial lift trucks is described in 16-page brochure. All models feature wide angle vision. Phantom view permits study of internal working features.

For more details circle NED-813 J7 on enclosed inquiry slip

DOR-TITE DA PRODUCTS SINCE 1910

for Sealing! Cushioning! Insulating! Silencing!

Air-tight plastic covering on the adhesive keeps DOR-TITE's adhesive extra tacky

Here's the soft, resilient sponge rubber stripping that solves countless problems . . . around windows, doors, etc. DOR-TITE installs fast thanks to factory-applied *extra tacky* adhesive. DOR-TITE stays put . . . never stretches . . . never creeps. Available in all popular sizes.

Installs in seconds!

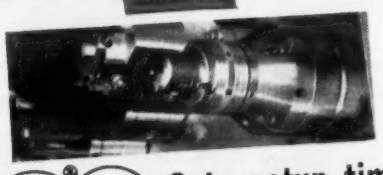
SPONGE RUBBER for • Pads • Cushions • Gaskets • Mountings
Available in all popular sizes

FREE SAMPLES
Write on your letterhead for samples of DOR-TITE and/or SPONGE RUBBER Dept NE-9

DURKEE ATWOOD V-BELTS

DURKEE-ATWOOD CO. Minneapolis 13, Minn.

For more details circle NED-815 J7 on enclosed inquiry slip



DEKA BORE Cuts setup time 300% at FORD PLANT!

THE PLACE: FORD MOTOR CO., AIRCRAFT ENGINE DIVISION, CHICAGO
THE JOB: BORING HIGH ALLOY STEEL LINERS IN MAGNESIUM HOUSING (36 Rockwell "C")
REPORT BY: TOOL ENGINEERING DEPT.

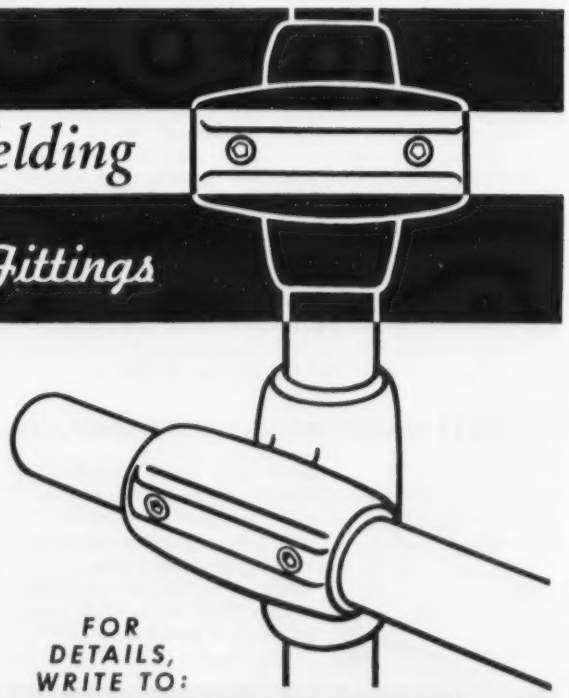
"Bore diameter tolerance is plus or minus .0003". There's an edge wear of .0001" to .0002" on the tool bit in the initial pass. Before, each final pass took several time consuming adjustments. We changed to a Deka-Bore boring head, and cut setup time 300%, because the Deka-Dial permits positive .0001" adjustment on all settings, in a few seconds. No backlash, either."

Attach this ad to your letterhead for free demonstration or literature!

PRECISION TOOL & MFG. CO. OF ILL.
DEKA BORE 1305 South Laramie, Cicero 50, Illinois

For more details circle NED-816 J7 on enclosed inquiry slip

No Threading, No Welding with NU-RAIL Slip-on Fittings



Precision-engineered NU-RAIL slip-on pipe fittings now make it possible for your own maintenance or shop employees to build sturdy storage racks and safety railings. No professional skills are required.

The exclusive NU-RAIL offset design permits continuous pipe lengths to pass through the fittings, and *cross each other without cutting!*

- You save TIME, and you save up to 80% of labor cost!
- NU-RAIL fittings are RE-USABLE, yielding a maximum amount of pipe salvage, and more *un-cut* pipe salvage than any other fitting method.
- NU-RAIL fittings are ADJUSTABLE without dismantling, adapt readily to your changing needs.
- Fit Standard I.P.S. size pipe.

SHEET STORAGE SAFETY RAILINGS PALLET RACKS

FOR DETAILS, WRITE TO:

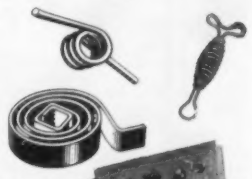
THE HOLLAENDER MANUFACTURING CO.
DEPT. X • 3841 SPRING GROVE AVENUE • CINCINNATI 23, OHIO

For more details circle NED-814 J7 on enclosed inquiry slip

need springs or formed wires?

let WICKWIRE supply them

Wickwire engineers have years of experience in designing the right spring and formed wire for the job. They can work from a sketch, handmade model, or statement of purpose with overall dimensions.



Get the whole story today. Write for your copy of Wickwire's Springs and Formed Wires manual (Bulletin S-500). Wickwire Spencer Steel Division, The Colorado Fuel and Iron Corporation, P.O. Box 551, Palmer, Mass.

THE COLORADO FUEL AND IRON CORPORATION—Denver and Oakland
WICKWIRE SPENCER STEEL DIVISION—Atlanta • Boston • Buffalo • Chicago
Detroit • New Orleans • New York • Philadelphia
CF&I OFFICES IN CANADA: Toronto • Montreal

CF&I WICKWIRE SPRINGS AND FORMED WIRES

4469

PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION

For more details circle NED-817 J7 on enclosed inquiry slip

STEEL CITY TESTERS ARE SUITED TO YOUR INDIVIDUAL NEEDS . . .

Yours for the asking...

This brochure illustrates and describes many types of machines for testing physical properties of metals. It belongs in your file.

Write to:

Steel City Testing Machines Inc
8819 Lyndon Ave., Detroit 38, Mich.

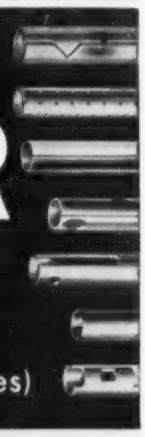
Sales offices in all metalworking areas.

For more details circle NED-818 J7 on enclosed inquiry slip

1001 USES!

SPACER TUBES

(Sleeves, Bushings, Ferrules)



Save Money on Many Jobs!

Investigate the substantial savings possible with rolled, split steel spacer tubes. They replace costly pipe, tubing or machined parts, eliminate cut-off or de-burring time, come ready for assembly, to your exact dimensions. Now saving money on thousands of applications from cars to phonographs, bicycles to chain hoists!

FREE CATALOG and PRICE LIST

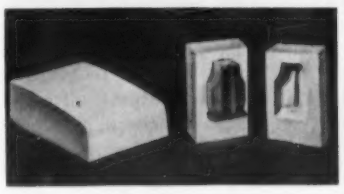
Shows wide range of standard sizes, also special features that can be included. Write for your copy today!

FEDERAL-MOGUL DIV.
Federal-Mogul-Bower Bearings, Inc.
11079 SHOEMAKER, DETROIT 13, MICHIGAN

For more details circle NED-819 J7 on enclosed inquiry slip

New Processes & Materials

FOAM CUSHIONING MATERIAL
molded to exact size and contour



Method of molding this polyether foam material on a production basis affords economical application as auto padding, cushioning, acoustical material, and thermal insulation. Its uniform cell structure provides for excellent absorption of shock, vibration, and sound. The lightweight, fire-retardant foam can be exposed to water, sunlight, solvents, heat, oils, or gasoline without damage and will not dry out, crumble, or become stiff or brittle. It is washable, odorless, and nonallergenic. Shown is molded cushion to protect delicate equipment. Made by **J. M. Cranz Co.**, Dept. N, 2671 Main St., Buffalo 14, N. Y.

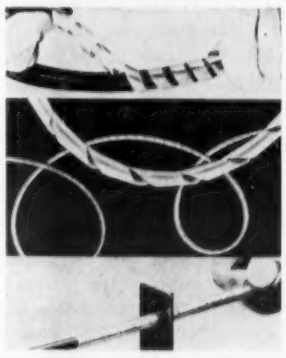
For more details circle NED-820 J7 on enclosed inquiry slip

HIGH-STRENGTH SOLDER ALLOY
for stainless and other base metals

Flux-cored EutecRod 157B is a high strength, silver-bearing, lead-free alloy for soldering stainless steel and other base metals. Alloy can be applied to all types of joints in stainless steel fabrication and used for joining dissimilar metals. It has temperature range of 400 to 500° F with ultimate tensile strength of 15,000 psi. Self-contained flux allows good tinning action. Lead-free deposits do not blacken and are readily plated. Solder is available in 1/8, 1/16 and 3/64-in. diameters and adapts to all heating methods, including flameless resistance, induction and transformer type soldering gun techniques. Made by **Eutectic Welding Alloys Corp.**, Dept. P, 172nd St. & Northern Blvd., Flushing 58, New York, N. Y.

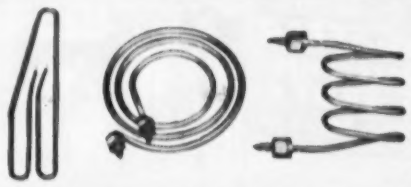
For more details circle NED-821 J7 on enclosed inquiry slip

SPIRAL CUT NYLON TUBING
wraps up to 1-in. wire bundles



Spiral cut nylon tubing offered in 1/8, 1/4 and 1/2-in. OD sizes can be readily used to wrap wire bundles up to 1/4, 1/2 and 1 in. OD, respectively. Quickly cut to desired lengths, tubing can also be used for grommet functions or to cover flexible shafts. Resiliency of nylon spiral provides quick snap-on action. Made by **Polymer Corp. of Pennsylvania**, 2140 Fairmont Ave., Reading, Pa.

For more details circle NED-822 J7 on enclosed inquiry slip



When to specify Vulcan Electric
TUBULAR HEATERS

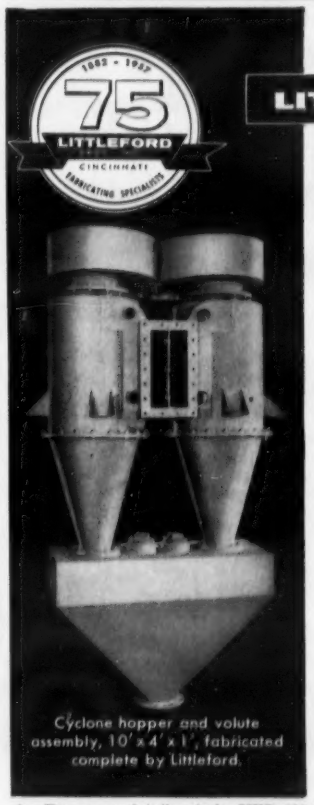
1. When application is for: Considerable heat — confined space. Straight or formed in variety of shapes for liquid, gas or metal heating applications. For casting into iron or aluminum. With threaded fittings for liquid immersion heating (water, oil, etc.).
2. When specifications call for: Length — 10" to 148"; diameter — .250", .280", .333", .450"; wattage — 10 to 10,000 (or higher); voltage — standard 115 or 230, special 6 to 440; sheaths — copper, steel, high temperature alloys.
3. When you have "hot" problems: Vulcan Engineers are ready to provide special heating units — engineered to your needs. Write for free catalog.

VULCAN

VULCAN ELECTRIC COMPANY
DANVERS 7, MASS.

Cartridge • Strip • Tubular • Immersion Electric Heaters
Soldering and Branding Irons • Solder and Glue Pots

For more details circle NED-824 J7 on enclosed inquiry slip



Cyclone hopper and volute assembly, 10' x 4' x 1', fabricated complete by Littleford.

LITTLEFORD

layout
shearing
punching
bending
flame cutting
assembly
welding
stress relieving
sand blasting
machining

Littleford's complete, top quality fabricating saves your time and facilities for your own specialty. Send us your blueprints for estimates on your requirements.

LITTLEFORD BROS., Inc.
Dept. LB-200,
453 E. Pearl St.,
Cincinnati 2, Ohio

For more details circle NED-825 J7 on enclosed inquiry slip

ONE FLICK RESETS this HIGH SPEED Electric COUNTER

Model "YE" by
DURANT
(Test count-life over 70 million)

Offered in TWO STYLES:
1. Quick PUSH-BUTTON RESET
2. Electric REMOTE RESET

First high-speed electrically actuated counters with added advantage of electric reset. Clean-cut, legible 3/16" figures, white on black. Ideal for all high-speed electric counting applications — accurate at high, low or intermediate speeds.

DURANT MANUFACTURING CO.
1922 N. Buffum St., 22 Thurbers Ave.
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ALASKA GRAY AND SEAL BROWN

Compact, with great rigidity — entirely enclosed against dust and moisture. Base or panel mount. Speeds to 1500 C.P.M.

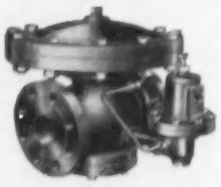
PRODUCTIMETERS
SINCE 1879 Count Everything

For more details circle NED-823 J7 on enclosed inquiry slip

Improved
FOR BETTER STEAM REGULATION
FISHER TYPE 92B
PILOT OPERATED REDUCING VALVE

Quicker, Easier Maintenance...

Fisher engineers have done it again! The 92B is not only extremely accurate, compact and flexible—but it minimizes problems inherent in steam regulation such as clogged orifices, sticky valves and diaphragm rupture. One pilot with three interchangeable springs covers a range of from 2 to 150 p.s.i.



Write for bulletin D-92

FISHER GOVERNOR COMPANY
Marshalltown, Iowa
Woodstock, Ontario

FISHER Controls

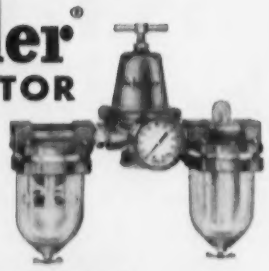
For more details circle NED-826 J7 on enclosed inquiry slip

For more details circle NED-827 J7 on enclosed inquiry slip

For more details circle NED-828 J7 on enclosed inquiry slip

SEND FOR COMPLETE SPECIFICATIONS AND LITERATURE

NEW **Schrader®** LUB-AIR-ATOR



filter . . .
regulate . . .
lubricate . . .
lengthen life of equipment

Now one installation does all three: filters air, regulates pressure, lubricates exactly. No moving parts. Can be serviced without disturbing pipe connections. Compact. A true preventive maintenance device to protect each of your air circuits. One of the three sections, individually or in combination, can be used. In designing with air start each hook-up with a Schrader Lub-air-ator – keep valuable equipment running more efficiently. Specification literature available on request.

A. SCHRADER'S SON
Division of
Scovill Manufacturing Company, Incorporated
459 Vanderbilt Avenue
Brooklyn 38, N. Y.

For more details circle NED-829 J7 on enclosed inquiry slip

New Literature & Catalogs

Reducing Maintenance Costs

Advance Floor Machine Co.—"How to Use Measured Work Techniques to Reduce Cleaning and Maintenance Costs" is title of illustrated handbook prepared by a methods engineering firm. This 28-page guide explains how to determine cleaning costs, establish job time requirements, conduct a basic time study, determine proper work loads, establish quality and frequency standards, develop maintenance procedures in new construction, and select the proper equipment.

For more details circle NED-830 J7 on enclosed inquiry slip

Abrasive Blast Cleaning Machines

Wheelabrator Corp.—Bulletins on four continuous Tumblast airless abrasive blast cleaning machines cover the 15, 36, 48 and 60-in. machines. All have end-discharge construction in which work to be cleaned continuously passes through the machine. Each bulletin covers design features and includes specifications.

For more details circle NED-831 J7 on enclosed inquiry slip

Tabulating Card Files

Record Files, Inc.—New and improved line of files for tabulated cards is described in 16-page catalog No. 1. Drawers in most files have handles front and back for carrying ease, and each has its own lock compressor. Files are available in two or four-drawer units and can be locked together side-to-side, back-to-back or top-to-bottom to form rigid batteries.

For more details circle NED-832 J7 on enclosed inquiry slip

Foundry Equipment

Stroman Furnace & Engineering Co.—Latest furnace designs for melting of ferrous and nonferrous metals are shown in 36-page bulletin 150. Stroman control panels, furnace loaders, special furnaces, an automatic slug casting machine, a new electric resistance furnace, core ovens, oil burners and centrifugal blowers are also shown and briefly described.

For more details circle NED-833 J7 on enclosed inquiry slip

Transformer Core Design

Westinghouse Electric Corp.—Design and application manual B-7048 on type C Hipersil cores for transformers and reactors tells what this core is, how it is made and how it is best applied. Techniques of banding cores and recommended methods of mounting are discussed in the 24-page booklet.

For more details circle NED-834 J7 on enclosed inquiry slip

Brushes for Industry

Anderson Corp.—Wire wheel, cup, Tampico, condenser tube, valve guide and hand types of industrial brushes for practically any cleaning or finishing need are detailed in 22-page guidebook "Brushes for Industry." Also listed are adaptors and deburring flanges for use with wire brushes.

For more details circle NED-835 J7 on enclosed inquiry slip

the **ONLY PORTABLE NIBBLER** *that* **CUTS METAL** *Without Distortion!*

WRITE • PHONE • WIRE for complete information

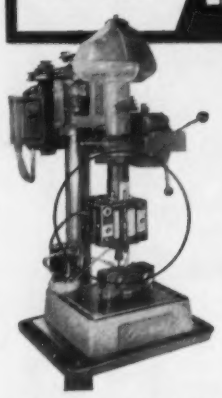
FENWAY
MACHINE COMPANY, INC.
680 Davisville Road
Willow Grove, Penna.

Pat. #2278174 • #7278311 • #2535631

For more details circle NED-836 J7 on enclosed inquiry slip

TIPS for PROFITABLE TAPPING

Commander LĒAD-MATIC TAPPER



High Production Automatic Lead Screw Tapper

Put a Commander Lēad-Matic Tapper on *any* drill press and you're ready to handle any tapping job — precision or otherwise. Designed to handle a very wide range of taps, Lēad-Matic operation is simple and foolproof — even inexperienced operators produce precision threads. The Lēad-Matic's electrically controlled cycle or jog tapping actions provide versatility to handle any job. Ruggedly built for trouble-free service.

Features That Help You Tap Better

- Precision ground lead screws insure finest threads.
- Automatic tap reversal—no drill press motor reversing—faster work.
- Hand, foot or fixture switch controls.

Your nearby Commander Distributor has the Lēad-Matic see it soon.

Commander MFG. CO.
4220 W. KINZIE ST., CHICAGO 24, ILLINOIS

For more details circle NED-837 J7 on enclosed inquiry slip

GARLAND SEAL-A-PORE • GARLAND SEALER

SEAL OUT WATER WIND WEATHER

New! **Exterior Masonry Weather-Proofing Team**

GARLAND SEALER
New "All-Oil" Caulk Stays Pliant for Years

Caulk joints and openings around doors, windows, flashings, with GARLAND SEALER, and you've weather-proofed them for years to come. GARLAND SEALER is new, unique—a special blending of treated oils and fiber-reinforcing that forms a tough skin—but won't dry out, crack, or shrink. Bonds with wood, metal, masonry, or glass with a bull-dog grip—stays pliant, "gives" with building movement.

GARLAND SEAL-A-PORE
Clear Silicone, Water-Repellent for Exterior Masonry Walls

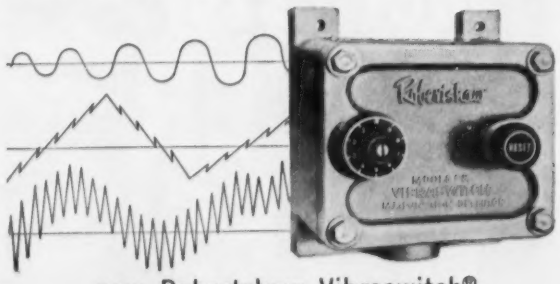
Spray SEAL-A-PORE on masonry walls—and water stays out! High silicone-content clear liquid coats masonry pores—yet does not alter texture or color. Seals brick, concrete-block, concrete, or lime stone with a "breather-type" film that shrugs off water, but lets inside moisture escape. Keeps walls dry and healthy! Prevents efflorescent stains. Made with low-volatile solvents for safe application.

Write Dept. D-9 for folder

THE GARLAND COMPANY
Cleveland 5, Ohio

For more details circle NED-838 J7 on enclosed inquiry slip

PREVENTS HARMFUL VIBRATION



new Robertshaw Vibraswitch® "Malfunction Detector"

Detects improper operation and anticipates component failures of rotating or reciprocating equipment

Actuates alarms or shuts down equipment when vibration exceeds the set limit

Responds to all kinds of vibration effects

Can ignore temporary, excessive vibration during start-up or normal operation

Simple and trouble-free . . . many types and housings available

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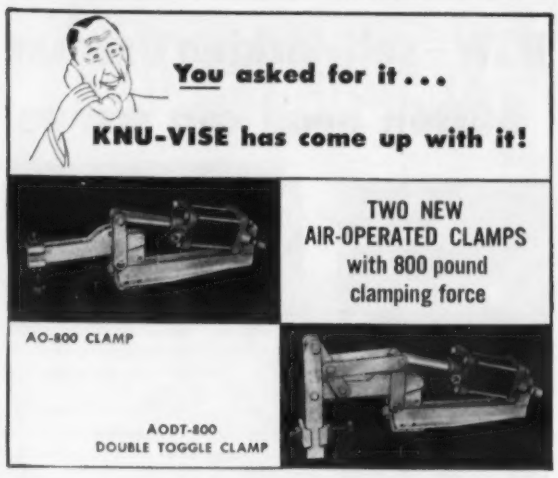
® patents pending

Robertshaw-Fulton CONTROLS COMPANY
FIELDEN INSTRUMENT DIVISION
Dept. F, 2920 N. 4th St., Phila. 33, Pa.

For more details circle NED-839 J7 on enclosed inquiry slip



Because you asked for it, Lapeer's vast line of Knu-Vise clamps now features four distinct groups of air-operated clamps. Two new 800 lb. air clamps have been added to the widely accepted 200, 400 and 1200 lb. air clamps, thereby rounding out the Knu-Vise series. The Model AO-800 clamp is for conventional holding operations—the Model AODT-800 for those difficult mounting situations.

For complete information on these units and the more than 150 other models available, write for catalog today!

Manufacturers of over 150 models of manually and air-operated clamps and pliers

KNU-VISE PRODUCTS LAPEER MANUFACTURING CO.

3062 DAVISON ROAD • LAPEER, MICHIGAN

WESTERN DIV. 422 Magnolia, Glendale, Calif. • CANADIAN DIV.: Higginson Equipt. Sales Ltd., Hamilton, Ont.

▲ For more details circle NED-840 J7 on enclosed inquiry slip ▲

VEEDER-ROOT

New! Key · Lock · Reset MAGNETIC COUNTER

Sturdy tumbler lock puts damper on tampering . . . and one turn of key resets all 6 figures to zeros. Designed for panel mounting where remote indication is required, counter is only 5.50" long, 2.125" wide, 2.755" high, with capacity of 1,000 counts per minute. Power consumption, 8 watts. Underwriter-approved. Available in 110 and 220 AC and DC, from stocks in Hartford, Chicago, and New York. *Order now.*

VEEDER-ROOT INC., Hartford 2, Conn.
Chicago 6, Ill. • New York 19, N. Y. • Greenville, S. C.
Los Angeles • San Francisco • Montreal 2, Canada
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"the Name that Counts"

▲ For more details circle NED-841 J7 on enclosed inquiry slip ▲

Here's an Easier way to handle your Blueprints!

This new, wall-type

Martin Sheet File System

enables you to work with a large number of blueprints more efficiently and neatly because each sheet hangs flat. When not in use, the sheet hangers fold flat against the wall, resulting in a minimum of storage space. A unique feature is the new spring clips which hold sheets firmly and permit quick and easy removal of sheets at any time. For complete information on how a Martin File System can solve your blueprint problems,

Write to Dept. NED.

Units are available in 2 sizes, Model #30 at $49.50 holds sheets up to 30" wide, and Model #42 at $63.80 holds sheets up to 42" wide. Both sizes have a gray hammertone finish.

Fort Pitt Fixture Company

2056 W. LIBERTY AVE. PITTSBURGH 26, PA.

▲ For more details circle NED-842 J7 on enclosed inquiry slip ▲

New Processes & Materials

MOVABLE WALLS
modular units made of aluminum in variety of colors and patterns

Natural aluminum and an almost unlimited number of colors are available in this modular movable aluminum wall system. Embossed panels in a variety of textures and patterns, in natural metal or in color, are also being produced. Panel sections may be stacked between extruded posts in a variety of ways. Wall sections are joined with narrow beads or wide column effects, using recessed, flush, or protruding posts in any profile and in any finish, including anodized colors.

Various glass treatments are also available. A "floating" door frame allows easy adjustment to compensate for varying floor levels or carpeting on one side of the door. Aluminum glazing strips are used. Trim is removable to give access to utility wiring from both sides of the partition. Walls are easily taken down and re-erected without loss of material. Erection is by the manufacturer, **E. F. Hauserman Co.**, 7561 Grant Ave., Cleveland 5, O.

▲ For more details circle NED-843 J7 on enclosed inquiry slip ▲

CONCRETE CURING AGENT
hardens, prevents excessive drying

Applied directly to newly-laid concrete, Emeri-Crete Kure is a nonresinous sodium silicate compound that cures concrete, hardens it by converting free lime to calcium silicate and also prevents excessive air drying. It is particularly suited for areas that must be covered with resilient floor coverings, since standard wax membrane or resin cures are reported to interfere with proper mastic adhesion. It contains a detergent that penetrates the floor surface to seal the porous concrete against evaporation. The hardening action prevents dusting of concrete as traffic wear occurs. Labor and material cost is approximately ¾-cent per sq ft. Power spray application is recommended, but it can be applied with hand spray, hair broom or a burlap drag. Made by **Walter Maguire Co.**, 60-N E. 42nd St., New York 17, N. Y.

▲ For more details circle NED-844 J7 on enclosed inquiry slip ▲

POLYPENCO NYLON

Now available in Extruded Profile Shapes

Get all the advantages of nylon with increased flexibility in design and use . . . PLUS new time and cost-saving opportunities.

Unusual properties offer superior performance

Polypenco profile shapes provide long wear, low sliding friction (without lubrication), smooth noise-free operation, non-abrasive contact with other materials.

Polypenco nylon profile shapes open up new possibilities in the production of parts such as runners, sliding surfaces, conveyor and channel tracks, and many others.

Write today for information
Ask for folder on "Shapes of Things To Come"

THE POLYMER CORPORATION OF PENNA.
Reading, Pennsylvania
Export: Polypenco, Inc., Reading, Pa., U.S.A.

POLYPENCO Nylon, POLYPENCO Teflon®, NYLAFLOW® and NYLATRON® GS

▲ For more details circle NED-845 J7 on enclosed inquiry slip ▲

DESIGNED BY CRANE to keep your steam lines hot, dry, efficient

Cross-section, Crane No. 9810 Inverted Open Float Steam Trap. Note extreme simplicity and compactness of construction.

Crane Inverted Open Float Steam Traps drain condensate automatically and instantly—save fuel and maintain operating efficiency.

High discharge capacities in relation to size permit more compact installations. Available in working pressures from 1 to 300 pounds saturated steam, sizes ½ to 1 inch.

LITERATURE ON REQUEST—see your Crane Representative or write to address below.

CRANE VALVES & FITTINGS
PIPE • KITCHENS • PLUMBING • HEATING

Since 1855—Crane Co., General Offices: Chicago 5, Ill.
Branches and Wholesalers Serving All Areas

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Stacking Problem? call EMI

anything can be

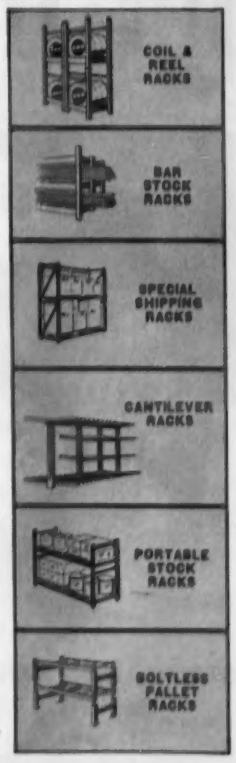
"well stacked"

or shipped on EMI racks

Big or little, strong or fragile, *anything* stacks or ships better on EMI quality racks. They protect stock, cut handling costs and speed inventory.

EMI RACKS are made of strong, tubular steel and are adjustable to fit any space or unit load. Special racks designed to your specifications with field engineering service on any installation.

Write for our illustrated catalog before you plan additional storage space or the purchase of stacking or shipping equipment.



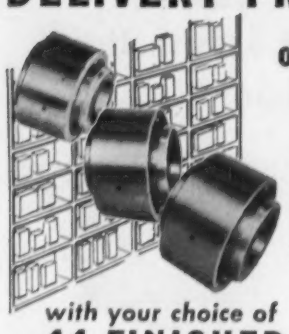
Well Stacked Racks for Industry

EQUIPMENT MFG. INC.

21566 HOOVER ROAD DETROIT 5, MICHIGAN

▲ For more details circle NED-847 J7 on enclosed inquiry slip ▲

DELIVERY FROM STOCK!



on standard types of

Sier-Bath

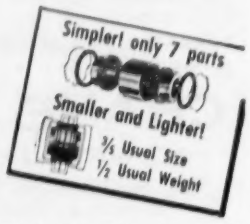
FLEXIBLE GEAR COUPLINGS

with your choice of

44 FINISHED BORE SIZES

Off-the-shelf delivery for your immediate needs—and a complete selection of 44 most popular finished bore sizes! That's what you buy when you order standard Flexible Gear Couplings from a Sier-Bath distributor or from the factory. Besides availability, you get the smallest, lightest, strongest, coupling size-for-size; with higher rpm, greater horsepower capacity. The Sier-Bath one-piece sleeve eliminates flanges and bolts, speeds up coupling and uncoupling, removes danger of "freeze-up." Priced generally lower than competitive brands!

Call your nearest distributor or write us for complete data. Ask for Catalog C-4.



Sier-Bath

GEAR AND PUMP CO., INC.
FLEXIBLE COUPLING DIVISION
9242 Hudson Blvd., North Bergen, N. J.
Founded 1905 Member A. G. M. A.

For more details circle NED-850 J7 on enclosed inquiry slip

SAVINGS $12.35 PER THOUSAND *over machine method cost*

SCREW MACHINING	$15.00 per thousand	COLD HEADED	$2.65 per thousand

Cold-Heading is the most versatile, most economical method for producing your fasteners and small parts. This case history is typical of thousands of money saving jobs we've done for our customers. May we quote on your requirements? Write today for the Hassall Catalog.

John Hassall, Inc., P.O. Box 2178 Westbury, Long Island, N.Y.

SINCE 1850

Hassall

NAILS, RIVETS, SCREWS AND OTHER COLD-HEADED FASTENERS AND SPECIALTIES

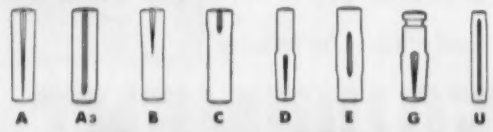
For more details circle NED-851 J7 on enclosed inquiry slip

get **THIS** *catalog!*

complete details on grooved pins and studs

Your copy of the new DRIV-LOK grooved fastener catalog is ready now. Write for it today. 24 pages of factual data in concise, easy to use form. No obligation, of course.

STANDARD TYPES . . . A COMPLETE LINE



DRIV-LOK PIN COMPANY
717 Chauncey St. • Sycamore, Illinois

For more details circle NED-852 J7 on enclosed inquiry slip

New Literature & Catalogs

Timers, Relays & Timing Motors

A. W. Haydon Co.—Series of 25 color-coded engineering bulletins on repeat cycle timers; time delay relays; elapsed time indicators; stop clocks, relays; and ac, dc and chronometrically governed timing motors are contained in metal-back loose-leaf catalog-manual. Application data sheets and general information are included.

For more details circle NED-853 J7 on enclosed inquiry slip

Conductor Stringing Blocks

Sherman & Reilly, Inc.—Illustrated catalog covers universal stringing sheave with adjustable crossarm bracket, wide throat snatch blocks, stringing snatch blocks with aluminum conductor guards, and blocks with hand line hooks, all designed for stringing electrical conductors. Specifications of each product are given.

For more details circle NED-854 J7 on enclosed inquiry slip

Large Nuts

Acimet Mfg. Co.—Buying manual lists specifications and prices of large nuts milled from bar stock and ranging in size from 1½ to 4 in. Tables are devoted to full, jam and slotted heavy semifinished hex nuts, and hexagon full and hexagon finished jam finished nuts. Forged and hot pressed nuts are also covered.

For more details circle NED-855 J7 on enclosed inquiry slip

Plastic Pipe & Fittings

Triangle Conduit & Cable Co., Plastic Pipe Div.—Rigid high impact plastic pipe and fittings described in illustrated 16-page technical catalog have broad application in industrial and processing fields. Uses, chemical resistance, electrical and physical properties, working pressures and pressure drop are covered. Installation procedures are detailed.

For more details circle NED-856 J7 on enclosed inquiry slip

Glassed Centrifugal Pump

Goulds Pumps, Inc.—Four sizes with capacities up to 700 gpm at heads up to 140 ft comprise line of Gould-Pfaudler glassed centrifugal pumps described in 12-page bulletin 725.2. All parts of pump in contact with corrosive materials are protected by permanent fusion of glass to metal. Glass withstands temperature changes of liquid up to 200° F differential. Specifications and performance curves are highlighted in bulletin.

For more details circle NED-857 J7 on enclosed inquiry slip

Electric Chain Hoist

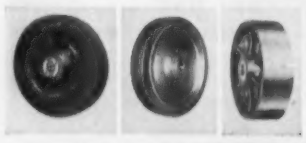
American Chain & Cable Co., Wright Hoist Div.—Single chain 300 to 2000-lb capacity model and double chain 3000 to 4000-lb capacity model are available in electric chain hoist line described in 4-page folder DH-73. Construction details, lifting speeds, dimensions and other data are included.

For more details circle NED-858 J7 on enclosed inquiry slip

Lift Jack and Semi-Live Skids-

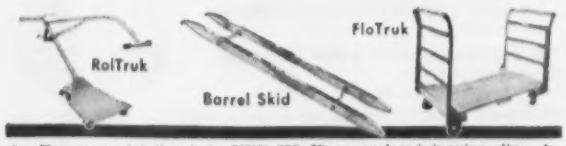
. . . Make an ideal Low Cost

HANDLING SYSTEM



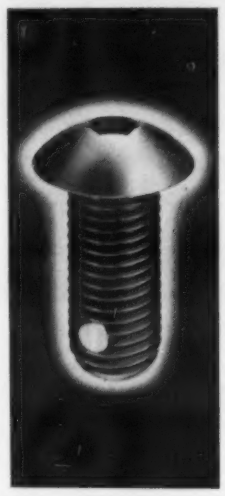
WHEELS
PLASTIC
RUBBER
METAL

Ironbound — **IRONBOUND**
55 Hoffman Place • Hillside, N. J.



For more details circle NED-859 J7 on enclosed inquiry slip

NEW—self-locking UNBRAKO button head cap screws



The Nylok* self-locking feature locks these screws securely in place. They won't work loose. Can be used repeatedly. Tough, resilient nylon locking pellets permanently installed. Successfully withstand temperatures ranging from —70 to 250°F. Low, streamlined heads with accurate hex sockets for positive nonslip drive and freedom from marred or mutilated heads. Heat treated alloy steel, continuous grain flow lines, fully formed Class 3A threads for maximum strength and exact fit. Pellets act as liquid seals. Standard sizes #6 to ⅝ in. Write for Bulletin 2193. Unbrako Socket Screw Division, STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

*TM Reg. U.S. Pat. Off., The Nylok Corporation

UNBRAKO SOCKET SCREW DIVISION

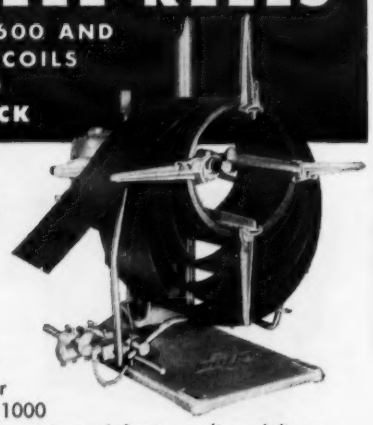
STANDARD PRESSED STEEL CO.
sps
JENKINTOWN PENNSYLVANIA

We also manufacture precision titanium fasteners. Write for free booklet.

For more details circle NED-860 J7 on enclosed inquiry slip

LITTELL REELS

FOR 300, 600 AND 1,000 LB. COILS DELIVERED FROM STOCK



No. 10 Littell Motor Driven Automatic Centering Reel for up to 1000 pound coils.

Three sizes of Littell Reels, for 300, 600 and 1000 pound coils are now in stock for *immediate* delivery. Easy to load, they center the coil automatically, hold it in balanced position. You get easy, smooth unwinding, greater accuracy and higher speeds for both hand and automatic feeding. All three sizes available in single or double Plain Brake or Motor Driven Reels. Write for catalog.

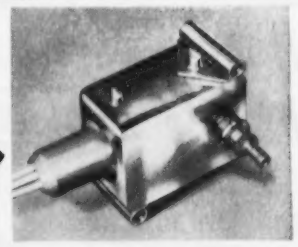
F. J. LITTELL MACHINE CO.
Speed with Safety

ROLL FEEDS • COIL CRADLES
STRAIGHTENING MACHINES
REELS • AIR BLAST VALVES
District Offices: Detroit, Cleveland

4169 N. RAVENSWOOD AVE., CHICAGO 13, ILL.

For more details circle NED-861 J7 on enclosed inquiry slip

NEW KLIXON C9178



ROTARY HERMETIC SWITCH

Gives you environment-free precision switching

The new KLIXON C9178 rotary hermetic switch is designed for such precision applications as aircraft landing gear controls, guided missile launchers, radar equipment, engine controls and industrial equipment.

A double-pole, double-throw rotary assembly, the C9178, has two MS24456 Type hermetically sealed switches enclosed in a steel case to withstand heavy impact and compression loads.

Technical data sheets on the C9178 and many other types of hermetic and sensitive switches are available. Write for PRSW Catalog.

Features of the C9178 include:

- **Completely Environment-Free**
- **Simultaneity**—Within 1½° of rotation
- **Excellent Shock and Vibration Resistance**
- **High Current Capacity**
- **Minimum Size**
- **Immunity of Ambient Temperature**

METALS & CONTROLS CORPORATION
Spencer Thermostat Division 2320 Forest Street, Attleboro, Mass.

For more details circle NED-862 J7 on enclosed inquiry slip

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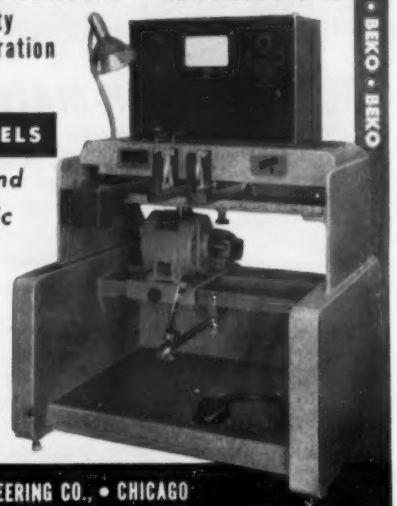
BEKO BALANCERS

serve you best with . . . BEKO

- More Efficiency • Higher Production
- Ease of Use by Unskilled Operators
- Greater Product Life • Increased Profits
- Simplicity of Operation



14 MODELS

Static and Dynamic

Write for FREE Catalog!

BALANCE ENGINEERING CO., • CHICAGO

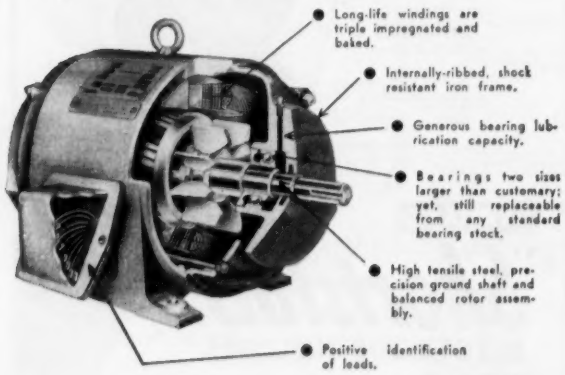
Sales Division: MACDELL CORP., 842 W. Lake St., Dept. NED Chicago 7, Ill.

B6572

For more details circle NED-863 J7 on enclosed inquiry slip

STAMINA of BROOK A.C. MOTORS is no coincidence!

Design is based on over half a century of experience. Built to surpass NEMA Specifications, yet cost no more than ordinary motors. Single and polyphase. All major types. 1 to 600 HP. Shipped from stock.



world's most respected motor

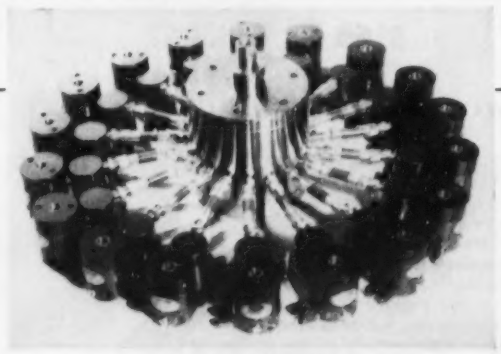
BROOK MOTOR CORPORATION

3553 W. PETERSON AVE., CHICAGO 45, ILL.

SINCE 1906 BROOK MOTOR CORPORATION

Factory Representative, Warehouses, Dealers, Service Stations, in Major Cities.

For more details circle NED-864 J7 on enclosed inquiry slip



REDMER

AIR CHUCK and ROTARY VALVE for FAST, MULTIPLE PRODUCTION

Redmer #000 Air Chuck Mounts on all standard makes of rotary tables 16" in diameter or over. Can be used on tables 24" or over with standard REDMER chucks for greater holding power. Safely holds round, square or hex pieces. Using standard B & S Type collets eliminates fixture making.

Rotary valve available with required number of outlets and necessary off and on positions. Manufactured to specifications only as to diameter, height required and number of outlets.

Send for complete details, price list and complete catalog of all REDMER chucks.

REDMER AIR DEVICES INC.

Guntersville • Box NED • Alabama

For more details circle NED-865 J7 on enclosed inquiry slip

New Processes & Materials

VINYL PLASTIC TAPE in transparent and 9 colors

Thin but strong No. 12 plastic tape is made from an unplasticized polyvinyl chloride film that will stick to almost any surface. It is waterproof; resists heat, cold, acids, alkalies, corrosives and abrasives; and does not become brittle. Available in transparent form and in nine colors, it can be used for waterproof container sealing, decorative banding, protection of items during manufacture and shipping, and for signs. It can also be imprinted for use as labels. Widths from ¼-in. up are available from **Devon Tape Corp.**, 519E S. Fifth Ave., Mt. Vernon, N. Y.

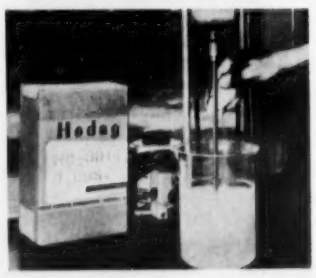
For more details circle NED-866 J7 on enclosed inquiry slip

MOLYBDENUM TUBING extruded type now available

Extruded molybdenum tubing is now available for evaluation purposes. The extrusion process was developed in co-operation with Climax Molybdenum Co. Molybdenum is stronger than any other known metal at temperatures in excess of 1700° F and resists corrosion by liquid metals. Thus, it is particularly suitable for use in nuclear reactor heat exchangers, missile and rocket combustion chambers, and for orifice tubing. It is available in 1-in. OD size with 0.1-in. wall thickness and in 3 to 6-ft lengths. Tensile strength is 70,000 to 100,000 psi and yield is 60,000 to 90,000 psi. Made by **Calumet & Hecla, Inc.**, Wolverine Tube Div., 1411 Central Ave., Detroit 9, Mich.

For more details circle NED-867 J7 on enclosed inquiry slip

ANTIFOAMING AGENT immediately emulsifies in water



Flake or powder forms of HC-300 antifoaming agent immediately emulsify when added to water in the required concentration, usually from ½ to 1 per cent. Material is packaged in the exact weight and quantity desired. It remains stable in storage for long periods of time. Made by **Hodag Chemical Corp.**, Dept. NED, 7247 N. Central Pk., Chicago 45, Ill.

For more details circle NED-868 J7 on enclosed inquiry slip

Models 400 and 600 Erickson Speed Indexers. Standard index plate provides 4, 6, 8, 12 and 24 positions. 32 special parts provide up to 30 positions on Model 400, up to 100 positions on Model 600. Other models available.

ERICKSON INDEXERS—

the economical way to smash automation bottlenecks

Even the most elaborate automatic production line can bog down *expensively* without rapid and accurate automatic parts positioning.

That's where Erickson Indexers really pay off. For you can interlock them into your production set-up with micro switches and solenoid valves. The hardened and ground lock pin operates in conjunction with the actuating mechanism to assure *positive positioning and angular accuracy within 2 minutes of a degree.* (Repetitive accuracy is no indication of angular accuracy. Erickson holds repetitive accuracy in low "tenths" of a thousandth.) And Erickson Indexers can maintain this great accuracy because their adjustable, self-contained shock control unit delivers a cushioned rotary load to the mechanism, thereby reducing wear.

Speed to keep lines moving . . . accuracy to reduce rejects . . . long life to cut maintenance and capital investment—all add up to Erickson Indexers, the *economical* way to smash automation bottlenecks.

ERICKSON TOOL COMPANY

2308-9 Hamilton Avenue • Cleveland 14, Ohio

Collet Chucks • Floating Holders • Tap Chucks • Indexers • Tap Holders Air-Operated Chucks • Expanding Mandrels • Special Holding Fixtures

For more details circle NED-869 J7 on enclosed inquiry slip

FREE Sample and Booklet Shows How and Why

Give your machines a modern installation . . . it pays to anchor with Unisorb. Send reader service card, call or write . . .

FE 7-5

The FELTERS Company

224 SOUTH STREET, BOSTON 11, MASS.

Manufacturers of Felt and Felt Products

OFFICES: New York, Philadelphia, Chicago, Detroit, St. Louis

SALES REPRESENTATIVE: San Francisco

Representatives in principal cities throughout the world

For more details circle NED-870 J7 on enclosed inquiry slip

Investigate...

Commercial's NEW IDEA METAL FORMING SERVICE!!

Your blueprint, sample, or even a sketch, when placed in Commercial's hands, could be your key to better, more economical component parts—stamped, forged or hydrospun.

Commercial's complete and extensive facilities for stamping, forging, and hydrospinning enable us to recommend *your* most economical method of production. Complete engineering and design service is cost free to you. At Commercial the tough, unusual, and tricky metal forming assignments are routine.

CUSTOM STAMPING—Specialized equipment . . . modern presses with capacities to 2,000 tons. Integrated tool and die service . . . economical large or small run, medium and heavy stampings meet exact requirements. Unique Commercial "die bank" includes over 2300 basic die components for greater cost saving in tooling up.

UPSET FORGINGS—1½" thru 8" upsetters . . . threading equipment to handle stock up to 6½" in diameter . . . facilities for rough and semi-finished machining. Advantages include metal saving, improved quality of surface and structure, greater and more uniform strength of section.

HYDROSPINNING—Forming of conical and spherical parts—diameters to 42" and lengths to 50", cylindrical lengths to 100". Forms parts faster than by conventional machining. Saves materials and adds greater strength and hardness properties without need for alloyed stock or heat treatment processes.

OTHER FACILITIES AVAILABLE for drilling, boring, machine trimming, burning and weldment of component parts—forgings or stampings—for further processing standard shapes to meet specialized requirements.

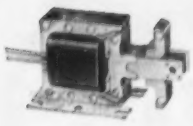
SEND US YOUR IDEA FIRST, WE'LL FORMULATE IT BEST FOR YOU!

COMMERCIAL shearing and stamping

Dept. J-36 • Youngstown 1, Ohio

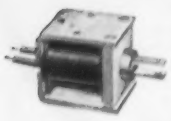
For more details circle NED-871 J7 on enclosed inquiry slip

3 new GUARDIAN Solenoids with POWER and a Stroke that add new "lift" to your product!



NEW NO. 18 with PERMASEAL Coil

Preferred where intense moisture conditions prevail. Coil winding, completely encapsulated in PERMASEAL thermosetting epoxy, resists water, humidity, oils, salt air, acid and alkaline solutions, ether, alcohol, hydraulics and other fluids. High dielectric strength, resistance to abrasion and thermal or mechanical shock enable it to operate at top efficiency.



NEW NO. 2 HEAVY DUTY

This new special version of Guardian's standard No. 2 Solenoid provides extra power and longer life yet utilizes the same space. Available in A.C. or D.C., for intermittent or continuous duty. Stroke adjustable from ½" to ¾"—lift more than 60 oz. Unit has surpassed 15 million continuous operations at peak operating efficiency.

NEW NO. 22 MIGHTY MIDGET

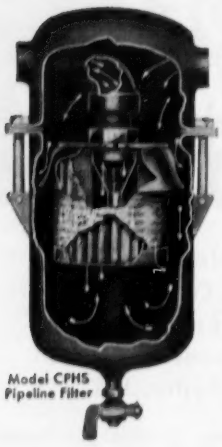
Tiny but powerful, this new Guardian Midget Solenoid packs a decisive punch. Strokes range from ⅛" to ½" and it lifts over 24 oz. Size ¾" x ¾" x 1½" is ideal when space is at a premium. Available in D.C. only, for intermittent or continuous duty applications.

Many Guardian Solenoids are available with PERMASEAL coils. Write for Bulletin SOL-8.

GUARDIAN ELECTRIC
1626-K W. WALNUT STREET CHICAGO 12, ILLINOIS
"Everything Under Control"

For more details circle NED-872 J7 on enclosed inquiry slip

STAYNEW
FILTER EFFICIENCY
INCREASES WITH USE



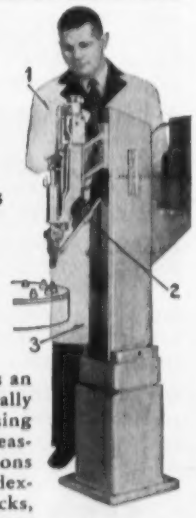
Maintenance of Dollinger Staynew Pipeline Filters (for air or gases) is drastically reduced by a unique design. Incoming air is first deflected to the outer walls and forced downward at high speed. Water, oil and heavier particles are deposited in base. The air then rises at a slower speed to pass through filtering material which removes lighter airborne particles. These tiny particles form a "cake" on the filter material which actually increases the filter efficiency with use. The need for frequent cleaning is positively eliminated. Write for Bulletin 200 for complete data. Dollinger Corporation, 49 Centre Park, Rochester 3, N. Y.

STAYNEW DOLLINGER FILTERS

For more details circle NED-873 J7 on enclosed inquiry slip

New Standard
DIXON
"Auto-Positioner"

Simplifies Small Parts Assembly Operations at Rates Up To 7200 Per Hour



Adapted to parts ¼" to 3" O.D. Locates on adjacent stations 3" apart, or on 12-station dial with a 5" fixture radius.

New Dixon "Auto-Positioner" combines three standardized units — (1) Automatic Escapement, (2) Automatic Air-Operated Positioner, (3) Mounting Structure — and now provides an economical solution to assembling a variety of small parts. It has an exclusive sensing feature that automatically stops your machines when parts are missing or malformed. "Auto-Positioners" are easily arranged at single or multiple stations with feeders, feed tracks, transfer or indexing tables. With properly tooled chucks, positioning punch, and proven feeder, parts are positioned at rates up to 7200 pieces per hour. Individual units or any combination of standard components available from stock. Tooled "Auto-Positioners" provided to suit needs.

WRITE FOR COMPLETE DATA
Ask for full data on range of sizes and design features today.

DIXON
DIXON AUTOMATIC TOOL, INC.
2302 23RD AVENUE — ROCKFORD, ILL.
AUTOMATIC PARTS HANDLING AND ASSEMBLY EQUIPMENT

For more details circle NED-874 J7 on enclosed inquiry slip

New Literature & Catalogs

Materials Handling Containers

Continental-Diamond Fibre Corp.—Trucks, trays, boxes, baskets, seamless roving cans and barrels comprise the line of vulcanized fiber material handling containers described in 16-page catalog MHC57. This hard, long-wearing fiber material is about half as heavy as aluminum; is resilient, noncorrosive and oilproof; and has a hard, smooth surface that will not splinter, scuff or scar.

For more details circle NED-875 J7 on enclosed inquiry slip

Propeller Fans

Hartzell Propeller Fan Co.—Revised air deliveries as well as complete specifications and performance data on Hartzell propeller fans are contained in 32-page catalog A-109-C. Standard propeller, cool-blast, Lo-Noise, reversible and Bi-Pass duct fans; intake air units; and unit heaters are shown. Capacities are available for practically any air-moving or exhaust need.

For more details circle NED-876 J7 on enclosed inquiry slip

Industrial Maintenance Products

Permatex Co.—Specific information on sealants and other chemicals, and how these chemicals can be used to solve different industrial sealing problems, is presented in new industrial, marine and aviation catalog. Sections are devoted to special and general purpose sealing compounds, cements, oils and lubricants, hydraulic fluids, service products, polishes and cleaners.

For more details circle NED-877 J7 on enclosed inquiry slip

Gas-Propelled Abrasive Cutting

S. S. White Industrial Div.—Possible uses for the Airbrasive unit for cutting, etching, drilling, light finishing and similar operations on wide range of metals, chemicals and plastics are described in 8-page bulletin 5705. Unit employs a high-speed gas-propelled stream of abrasive particles to cut germanium, shape fragile crystals, etch polished plastics, debur stainless steel, and drill holes and grooves in glass.

For more details circle NED-878 J7 on enclosed inquiry slip

Precision Scales

Exact Weight Scale Co.—Thirty-four different models, ranging in capacity from 2000 milligrams to 100 lb comprise the line of Shadograph industrial scales described in 8-page brochure 3333. Visible sensitivities range from 12 milligrams to ¼-oz.

For more details circle NED-879 J7 on enclosed inquiry slip

Duplex Steam Pumps

Canton Stoker Corp., Wagner Pump Div.—Duplex steam driven reciprocating pumps as well as electric models are described in illustrated bulletin WS-18. They are adaptable for general service and for boiler feeding.

For more details circle NED-880 J7 on enclosed inquiry slip

The New SCHERR
MICRO-PROJECTOR
with the VERTICAL design

NEW 1957 SELF CONTAINED IMPROVED MODEL

FEATURING
- RIGID FLOOR BASE - ELIMINATING EXTRA CHARGE FOR TABLE
- TILTING STAGE FOR HELIX, ANGLES AND BEVELS
- 4" DIA. STAGE OPENING
- 14" DIAMETER SCREEN
- COLUMN SLIDE ADJUSTABLE FOR WEAR BY MEANS OF GIBS - WILL HOLD SQUARE INDEFINITELY.
- CUSTOM MADE PRECISION COATED LENSES & DOUBLE CONDENSERS FOR DIFFERENT OBJECTIVES 10 TO 100X MAGNIFICATION.
- AN ENTIRELY NEW PRACTICAL DESIGNED TOOL FOR INSPECTION DEPARTMENT AND PRODUCTION SHOP.

WRITE FOR ILLUSTRATED FOLDER

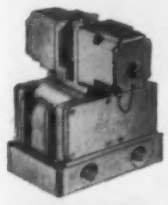
GEO. SCHERR CO., Inc.
COMPLETE LINE OF PRECISION INSTRUMENTS
200 ND LAFAYETTE STREET • NEW YORK 12, N.Y.

For more details circle NED-881 J7 on enclosed inquiry slip

Not Hurt by Dirt!

another Plus Value

Poppet seats, cleaned on each cycle . . . prolong valve life . . . eliminate costly maintenance



NOPAK-MATIC valves reduce maintenance and downtime! Nopak-matic poppet-type air control valves are designed to tolerate dirty air and keep going. New design and materials insure millions of trouble free cycles.

Other NOPAK-MATIC Features
- Exclusive "Flow-Director" pilot heads for greater valve versatility.
- Complete pilot head interchangeability.
- Replaceable, self-cleaning seats.
- New design for fast maintenance.
- 100% J.I.C. conformance at no extra cost.
- Simplified piping.

A6-607-1/9

SEND FOR CATALOG 105

NOPAK VALVES and CYLINDERS
GALLAND-HENNING NOPAK DIVISION • 2755 S. 31st St., Milwaukee 46, Wis.

For more details circle NED-882 J7 on enclosed inquiry slip

BERNARD
"Shortstub"
ELECTRODE HOLDERS
Unequalled for Efficiency and Economy in High Current, High Speed Welding
BERNARD WELDING EQUIPMENT COMPANY
10228 AVENUE N, CHICAGO 17, ILLINOIS

For more details circle NED-883 J7 on enclosed inquiry slip

reduce
BENDING COSTS
WITH PEDRICK MULTIPLE BENDING

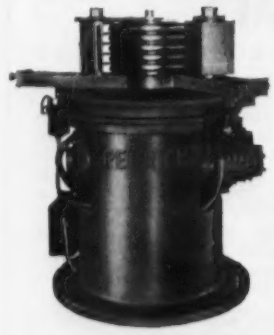
If cost is a critical factor in your bending operations for pipe, tube or structural metal—we've got news for you!

Multiple bending on Pedrick machines will *cut those costs to the bone!* Let us show you.

Write PEDRICK TOOL AND MACHINE CO., 3640 N. Lawrence St., Philadelphia 40, Pa. Dept. 6.

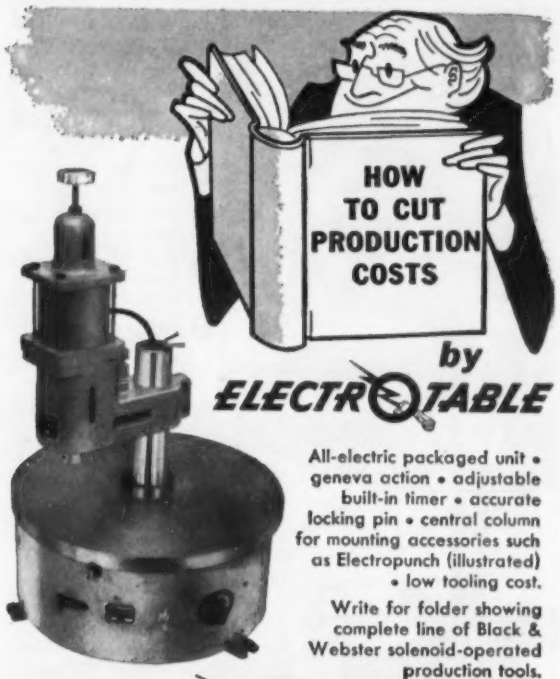
See Pedrick Exhibit at THE METAL SHOW, Chicago, Nov. 4-8, Booth 1853

FREE "PEDRICK LINE" BULLETIN. WRITE TODAY.



PEDRICK production benders

For more details circle NED-884 J7 on enclosed inquiry slip



All-electric packaged unit • geneva action • adjustable built-in timer • accurate locking pin • central column for mounting accessories such as Electropunch (illustrated) • low tooling cost.

Write for folder showing complete line of Black & Webster solenoid-operated production tools.

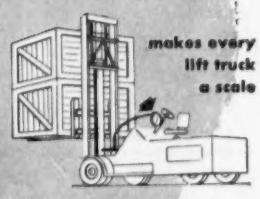
BLACK & WEBSTER, INC.

Dept. 1, 445 Watertown Street, Newton 58, Mass.

SOLENOID-OPERATED PRODUCTION TOOLS

▲ For more details circle NED-885 J7 on enclosed inquiry slip ▲

Weigh it as you Lift it



makes every lift truck a scale

with the **MARTIN-DECKER Lift Truck Scale**

FITS ANY HYDRAULIC-CYLINDER-TYPE FORK-LIFT TRUCK

This inexpensive device shows the driver the exact weight picked up, thus assuring a full load with safety. It can be used to totalize loads and check records of stock and inter-plant storage. Permits floor weight distribution. Prevents elevator overloads. Safeguards equipment and life.

Martin-Decker Corp., 3431 Cherry Ave., Long Beach 7, Calif., Dept. 5-7

MARTIN-DECKER CORP.

HOME OF THE WEIGHT INDICATOR — LONG BEACH, CALIFORNIA

▲ For more details circle NED-886 J7 on enclosed inquiry slip ▲

TAMING A "MONSTER" IN CAST STEEL

LEBANON'S with CERAMICAST* PROCESS

THIS FLOW DIVIDER AND FUEL SELECTOR FOR A JET ENGINE was called the "monster" by its designers at the Cleveland Division of Parker Aircraft Company. Why? Because the dimensional requirements of the inner passages called for the most extreme quality control in the casting process.

Lebanon engineered a special coring material to meet these requirements and developed special gauges for setting and holding the cores to meet the dimensional tolerances.

LET US TAME YOUR "MONSTER." If your design project utilizes cast steel and requires a high degree of casting quality, CERAMICAST may provide definite quality and cost advantages. Let our engineers discuss the process with you. Write for CERAMICAST literature.

*CERAMICAST *is a registered trademark*

LEBANON STEEL FOUNDRY

128 Lehman Street, Lebanon, Pennsylvania

CARBON, LOW ALLOY AND STAINLESS STEEL CASTINGS

▲ For more details circle NED-887 J7 on enclosed inquiry slip ▲

New Processes & Materials

CLEANING-POLISHING CLOTH
silicone treated and leaves no lint

A protective, odorless, nonoily coating is imparted to highly finished glass, plastic and metal surfaces by this silicone-treated nonwoven rayon wiping and polishing cloth. It protects against fingerprints and the etching action of skin acids, dust, lint, mildly corrosive atmospheres and other industrial wastes such as grit and moisture. Finish is water repellent, and cloth can be used to polish and protect reflectors, lenses, precision tools and gages, and other critical surfaces. Sample three-cloth package is $1. For industrial use, 100-cloth packages sell for $26.50, postpaid. Offered by **Edmund Scientific Co.,** 180 E. Gloucester Pike, Barrington 25, N. J.

▲ For more details circle NED-888 J7 on enclosed inquiry slip ▲

VINYL COATED FABRIC
resists fire, water, mildew

In a two-year exposure test in the South, Tuf-Tex vinyl coated industrial fabric retained a minimum of 90 per cent of such properties as tensile strength, tear resistance, water leakage, fire and mildew resistance, and flexibility. It can be used in portable welding shields, protective fire blankets, welding curtains and heat shields. It carries Factory Mutual approval and is fire, water, weather, oil and grease resistant. Sample swatches are available. Made by **Frommelt Industries,** Dept. 55-L.D.S., Box 419, Dubuque, Iowa.

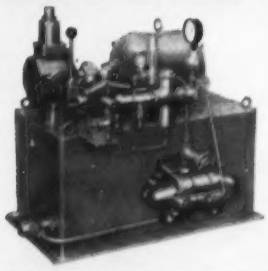
▲ For more details circle NED-889 J7 on enclosed inquiry slip ▲

LENS CLEANING FLUID
affords antifogging properties

Both plastic and glass surfaces can be kept clean and fog-free with Super-Clear combination lens cleaner and antifog fluid. Fluid can be sprayed on lens and wiped with either cloth or goggle cleaning tissue. Lenses will remain clear under extreme humid conditions. Fluid is nontoxic, noninflammable and will not deteriorate metal or rubber. It is supplied in 2-oz squeeze bottles and in pint or gallon containers by **American Optical Co.,** Safety Products Div., 1492 Mechanic St., Southbridge, Mass.

▲ For more details circle NED-890 J7 on enclosed inquiry slip ▲

RACINE HYDRAULIC COMPONENTS



TYPICAL RACINE "POWER UNIT" DESIGNED AND BUILT TO YOUR SPECIFIC NEEDS

Assure installation and operation economies

IMPORTANT TO YOU!

INSTALLATION ECONOMIES — Racine designed and built hydraulic "Power Units" are compact — yet all components are easily accessible for quick servicing. Hook-up to your equipment is fast and simple.

OPERATION ECONOMIES — With Racine Variable Volume Pumps and Boosters, you get high-pressure results at low-pressure cost. *You put all of the oil to work.*

EQUIPMENT ECONOMIES — Racine's unique hydraulic design requires a minimum of components, thus extreme circuit simplification.

RACINE HYDRAULICS & MACHINERY, INC.

2089 Albert St., Racine, Wis.

▲ For more details circle NED-891 J7 on enclosed inquiry slip ▲

MAG sez: it's Free! send for new

CATALOG of Permanent MAGNETS

Most complete line of standard stacked magnets — sintered and cast — ever assembled in a single catalog. Magnets for every use . . . electronics thru toys. All shapes, all sizes. Write, now.

PERMAG CORP.

210 TAAFFE PLACE

BROOKLYN 5, NEW YORK

Teletype No. N. Y. 2-4957

Telephone: MAin 2-0114

▲ For more details circle NED-892 J7 on enclosed inquiry slip ▲

1200 ¾" TUBE ENDS PER HR. Deburred AND Faced ON PINES END-FINISHING MACHINE

At Tube Processing, Inc., Indianapolis, the Pines No. 600 End-Finishing Machine, illustrated at right, is today performing combination facing and inside and outside deburring operations on 3/4"x.035" x 15" steel tubes at average net production rates of 1200 tube ends per hour. On smaller jobs, 1/4" and 3/16" steel tubes, net production averages up to 2000 ends per hour. The machine is equipped with air-operated clamp and foot pedal control.

Fast, Accurate Work

These outstanding performance records are typical of fast, accurate results achieved in other plants on all kinds of deburring, facing, chamfering, pointing, and reaming operations. This is because the machine is designed to clamp and feed work to the rotating cutters in one pass. This enables the operator to work more efficiently with less fatigue. Small and compact, the Pines No. 600 handles stock diameters up to 2". Maximum feed stroke is 1-1/4". Larger models for stock sizes up to 5" are also available.

PINES ENGINEERING CO., INC.

Specialists in Tube Fabricating Machinery — 651 WALNUT • AURORA, ILLINOIS

PRODUCTION BENDING • DEBURRING • CHAMFERING MACHINERY

FREE BULLETIN Write for facts on how these machines cut production costs.

▲ For more details circle NED-893 J7 on enclosed inquiry slip ▲

if

IF larger motor is necessary to start machine than required to run it.

If special motors or controls are used because of heating problems due to frequent starting or long starting periods because of high WR^2.

If shock start will break mechanism or work and a softer start is required.

If dual drive with automatic coupling of standby prime mover is required.

IF your answer is yes to any of these questions you need a RAWSON COUPLING, the centrifugal clutch that is as "simple as a handshake." Remember: Starting a load with the new RAWSON is like starting a motor without any load.

RAWSON COUPLING DIVISION

O. S. WALKER CO., Inc.

WORCESTER, MASS.

▲ For more details circle NED-894 J7 on enclosed inquiry slip ▲

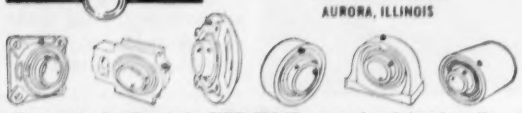
SEALMASTER BEARING UNITS
turning point for production!

SEALMASTER Ball Bearing Units are the answer to industry's quest for high speed and precision in production. In daily operation throughout the industrial field, SEALMASTER Bearing Units keep production on the move, reduce maintenance and "down-time" and give their users carefree bearing service.

See your Sealmaster Distributor or write for Bulletin 454

SEALMASTER

BEARING DIVISION
STEPHENS-ADAMSON MFG. CO.
12 RIDGEWAY AVENUE
AURORA, ILLINOIS



For more details circle NED-896 J7 on enclosed inquiry slip

TWICE AS MUCH PRODUCTION

An automotive manufacturer tested Ex-Cell-O Bushings along with two other leading brands. The results speak for themselves. Average number of parts produced during .001" wear:

Company A.....1,045 parts
Company B.....1,910 parts
EX-CELL-O .....2,255 parts

EASIEST-TO-USE 16-PAGE CATALOG

This bushing catalog is the easiest-to-use in the industry, say Ex-Cell-O customers. Logically breaks down into types, groups and sizes, complete with conversion chart. This 16-pager is yours free.

57-53

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EX-CELL-O FOR PRECISION

EX-CELL-O CORPORATION DETROIT 32, MICHIGAN

For more details circle NED-897 J7 on enclosed inquiry slip

SHOWS CO Hazard INSTANTLY

- Shows CO hazard directly — at a glance
- Requires no color matching or reference to comparator scales
- Test takes only a few seconds
- Simple in operation; easy to use
- No special training needed

MONOXOR CARBON MONOXIDE DETECTOR

REPLACEABLE DETECTOR TUBE CONTAINS YELLOW CHEMICAL WHICH TURNS BROWN WHEN AIR "SNIFFED" THROUGH DETECTOR TUBE BY PENCIL-SIZE ASPIRATOR CONTAINS CARBON MONOXIDE

The MONOXOR detects presence of CO, even in concentrations as low as 100 parts CO per million parts of air. Particularly useful for a spot-check of carbon monoxide contamination in garages, vehicular tunnels, mines, industrial plants and wherever gas appliances are operated.

$22.70 Price Complete—includes MONOXOR Instrument, 24 Detector Tubes, 6 Tube Caps, in Pocket Case

For Complete Particulars . . . Clip this ad and mail to us with your name and address, or write for Leaflet 859.

BACHARACH INDUSTRIAL INSTRUMENT CO.

For more details circle NED-898 J7 on enclosed inquiry slip

New Literature & Catalogs

General Purpose Centrifugal Pumps

Ingersoll-Rand Co.—Six basic sizes with capacities from 100 to 3500 gpm, pressures to 450 psi, heads to 1100 ft and temperatures to 300° F comprise line of Class GT general purpose, two-stage centrifugal pumps, subject of 16-page illustrated bulletin. Design features, application data, selection charts and specifications are included.

For more details circle NED-899 J7 on enclosed inquiry slip

Tractor-Loaders

Tractomotive Corp.—Five models of two and four-wheel drive TractoLoaders for bulk materials handling, loading and transporting are detailed in 16-page bulletin 1033-5-57. In addition to standard buckets or hoppers, machines can be equipped with crane hook, lift fork, backfiller blade or back hoe.

For more details circle NED-900 J7 on enclosed inquiry slip

Storage Racks

Warehouse Storage Systems Co.—Hi-Line storage racks, which are tailored to warehouse needs from standard vertical frames and horizontal load members, are detailed in 6-page illustrated folder. Racks can be erected to practically any width, depth, height or capacity requirement.

For more details circle NED-901 J7 on enclosed inquiry slip

Tool Lubricants & Coolants

Van Straaten Chemical Co.—What good tool lubricants do, how to select them, cutting speeds and how grinding coolants selection depends on wheel form, area of contact and grit size are among subjects discussed in 12-page brochure "Tool Lubricants and Grinding Coolants—What They Do and How To Select Them."

For more details circle NED-902 J7 on enclosed inquiry slip

Stacking Pallets

Tier-Rack Corp.—Developed for palletizing irregular-shaped items, products subject to damage by compression and items requiring accessibility for order selection, Tier-Rack pallet stacking frames simply snap onto standard pallets and lock in place. These easy-to-use materials handling aids nest for compact storage. Full details of their design and typical uses are contained in 8-page illustrated bulletin.

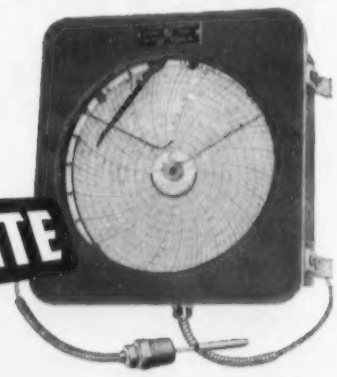
For more details circle NED-903 J7 on enclosed inquiry slip

Standard Motor Control Center

Cutler-Hammer, Inc.—Modular design of Unitrol standardized motor control centers allows a wide variety of motor control in a central structure. 32-page booklet EL-174, with photos, charts and layout plans, presents the varied applications and engineering data needed for selection and planning. Panel layouts permit adding such options as three-coil overload protection, control transformers and control fuses, without crowding.

For more details circle NED-904 J7 on enclosed inquiry slip

A NEW Development from AUTO-LITE



INKLESS TEMPERATURE RECORDER!

The newest advance in temperature recording . . . Auto-Lite model 2200 operates completely without ink. It simplifies temperature recording for most processing operations.

- 2 small mercury batteries in case energize transistor oscillator connected to stylus arm.
- Stylus records temperature on 6" evenly calibrated sensitized chart.
- Battery life approximates 2000 hours.
- Records operating temperatures for 24-hour or 7-day cycles.
- Easily serviced — minimum maintenance.

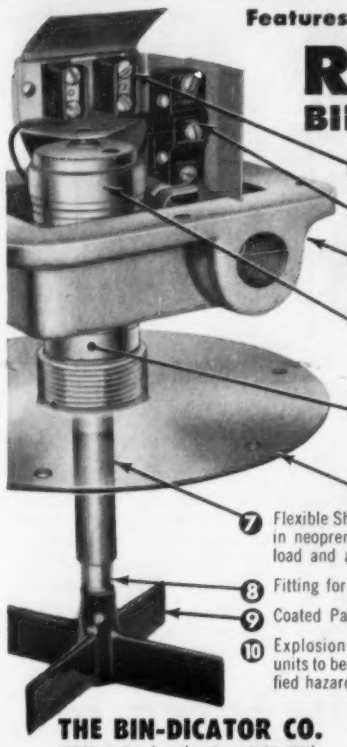
THE ELECTRIC AUTO-LITE COMPANY
INDUSTRIAL THERMOMETER DIVISION
TOLEDO 1, OHIO
NEW YORK • CHICAGO • SARNIA, ONTARIO

Electric or mechanical chart drive available for either 24-hr. or 7-day rotation. In wall mounting, portable and self-contained type cases. Remote reading with capillary tubing. Temperature charts in ranges from −40°F to +550°F. Write for further information.

TEMPERATURE RECORDERS & INDICATORS

For more details circle NED-905 J7 on enclosed inquiry slip

Features of the Improved ROTO-BIN-DICATOR



1. H.D. Terminal Block; easy connections.
2. Micro Switch for control circuit.
3. Dust-tight gray iron housing; std. or exp. proof.
4. Low Torque Motor supported on 2 bearing points for protection from vibration.
5. Precision Ground Drive Shaft; packed ball bearings for H.D. operation.
6. Mounting Plate 8" dia.
7. Flexible Shaft; heavy coil spring molded in neoprene for long life under heavy load and abrasion.
8. Fitting for easy shaft extension.
9. Coated Paddle resists abrasion.
10. Explosion-Proof Models; first and only units to bear U.L. Label for use in specified hazardous atmospheres.

THE BIN-DICATOR CO.
13946-A Kercheval • Detroit 15, Mich.

Write for Bulletin BD-8C. or call VAlley 2-6952

WE SELL DIRECT • PHONE ORDERS COLLECT

For more details circle NED-906 J7 on enclosed inquiry slip

CESCO . . . RIGHT—BEFORE YOUR EYES!

New CESCO plastic safety glasses WITH ULTRA-MODERN LENS STYLE

• These new CESCO plastic frame safety glasses with the F7 shape lenses are not only superior in their field from the standpoint of fit and comfort but many users prefer their shape and style to that of most personal glasses.

In addition to their fine appearance, these safety glasses have many outstanding features. Among them:

New CESCO plastic frame safety glasses are available in 3 sizes. Note modern shape and style.

Frames are rigid and will retain original shape without bowing
Choice of 2 colors—opaque slate (to eliminate light reflection) or translucent flesh
Nosepads are broad bearing to give comfortable distribution of weight
Lenses are interchangeable—the same lens fits either right or left side • **Available in three sizes**

ASK your CESCO Safety Equipment Distributor to show you the new modern plastic frame safety glasses with the F7 lens—and the many other safety glasses and goggles in the complete CESCO line

CHICAGO EYE SHIELD COMPANY
2715 West Roscoe St.
Chicago 18, Illinois

CESCO FOR SAFETY

For more details circle NED-907 J7 on enclosed inquiry slip

Tempilstiks°

FOR ALL HEAT-DEPENDENT OPERATIONS . . .

looks like a crayon
marks like a crayon
tells temperatures like a precision instrument

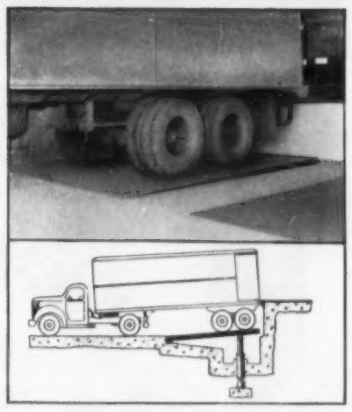
Sixty-three different compositions enable you to determine and control working temperatures from 113° to 2000°F. TEMPILSTIK° marks on workpiece "say when" by melting at stated temperatures — plus or minus 1%.
Also available in liquid and pellet form . . . Write **Advertising Division** for sample TEMPIL° pellets. . . State temperatures of interest — please!

Tempil°
CORPORATION
132 WEST 22nd STREET, NEW YORK 11, N. Y.

VISIT OUR BOOTH—No. 1041 at CHICAGO METAL SHOW, November 4-9

For more details circle NED-908 J7 on enclosed inquiry slip

BRING TRUCK BEDS TO LOADING LEVEL EASILY... QUICKLY



with a GLOBE TRUCK LEVELER

Globe Truck Levelers position the rear of a vehicle flush with loading platform by raising or lowering the rear wheels. Level loading is fast, safe and economical.

The unit consists of a sturdy hinged ramp installed at ground level, powered by two hydraulic rams operated in unison. Pushbutton or lever control conveniently located on dock for quick action. Size is 10 x 12 feet . . . lifting capacity is 40,000 lbs.

GLOBE TRUCK LEVELER®

Write today for more information to Globe Hoist Company, East Mermaid Lane at Queen Street, Philadelphia 18, Pennsylvania.

For more details circle NED-909 J7 on enclosed inquiry slip

You can save time, labor & space, **WITH ALSOP UNITS**

Regardless of the size or type of your installation, whatever your process may be, there's an Alsop Filter, Mixer, Storage and Mixing Tank engineered to meet your requirements. You may be assured of dependability and service with our equipment with its proved performance features. Alsop Filters, Mixers, and Tanks are available in a complete range of sizes.

Please send for our new FREE catalogue.

ALSOP ENGINEERING CORP. 1209 East Road Milldale, Connecticut

For more details circle NED-910 J7 on enclosed inquiry slip

Meg® TYPE of Megger INSULATION TESTER

WITH NEW A-R-K SWITCH GIVES YOU ALL THESE FEATURES IN ONE INSTRUMENT

- Megohm Scale ÷ 1 and ÷ 10 (Formerly the A switch)
- Ohm Scale (Formerly the R switch)
- Capacitance Discharge (Formerly the K switch)
- Earth, Line and Guard terminals—no need to change terminal connections when switching to ohm scale

This multi-purpose switch affords you all these features in one instrument. Available with voltages of 400, 500 or 1000 volts d-c and with ranges from 0 to 20 up to 0 to 2000 megohms—0 to 10,000 ohms. 2-712-R

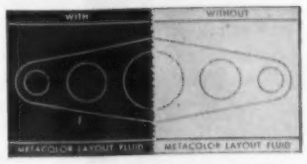
For prices and specifications write for BULLETIN 21-45-D.

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA

For more details circle NED-911 J7 on enclosed inquiry slip

New Processes & Materials

LAYOUT DYE
removable in vapor degreaser



After application by brush, dip or spray, Metacolor metal dye and layout fluid dries in 15 seconds on dies, templates, patterns and other metal parts. It is nonexplosive and nontoxic. Once it has served its purpose, it is quickly removed by vapor degreasing, or by wiping with almost any petroleum, coal tar or chlorinated solvent. Dye is furnished in a variety of opaque colors and can be used for color coding. Sample is available free from **Phillips Process Co.,** 190 Mill St., Rochester 14, N. Y.

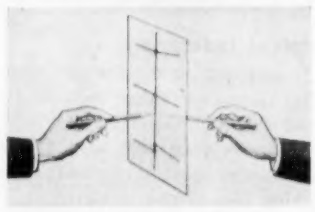
For more details circle NED-912 J7 on enclosed inquiry slip

ALUMINUM WELDING ELECTRODE
bridges gaps, builds up fillets

Facing aluminum surfaces need not be parallel or close-fitting when Eutec-Rod 999FC is used, as it will bridge gaps, flow over rough surfaces and build up concave fillets. It has sufficient capillarity to effect light gage T-joints. Bonding temperature of about 1050° F minimizes metallurgical changes in base metals, as well as burn-through. Deposits may be made in vertical-up and overhead positions. Thin-walled castings can be built up without prolonged preheating. Eutector flux is sprinkled on the reverse side of the joint when a heavy build-up and extra capillarity are required. Made by **Eutectic Welding Alloys Corp.,** Dept. P, 172nd St. & Northern Blvd., Flushing 58, N. Y.

For more details circle NED-913 J7 on enclosed inquiry slip

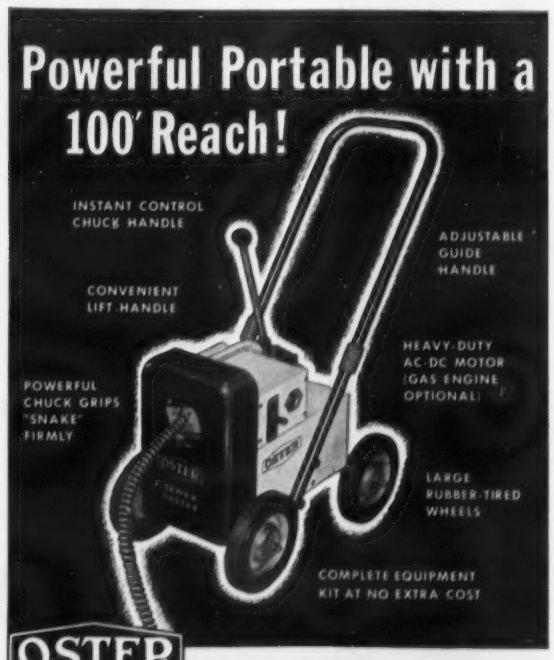
TRACING CLOTH
is double-surfaced and waterproof



Unchanging parts of a drawing can be drawn on one side of No. 378WD Whitney double-surfaced water-repellent tracing cloth, and details which may be subject to repeated revision are drawn on the other side. Erasures are made easily on the detail side without danger of removing information from the other side. Cloth is impervious to perspiration stains and water spotting, and can be cleaned with common solvents without damage. It can take pencil lines as hard as 9H and repeated erasures without surface damage. It is available in all sheet sizes and in 20-yd rolls 30, 36 or 42 in. wide. Free 8½ x 11-in. samples are offered by **Charles Bruning Co.,** Dept. NE15, 4700 W. Montrose Ave., Chicago 41, Ill.

For more details circle NED-914 J7 on enclosed inquiry slip

Powerful Portable with a 100' Reach!



OSTER No. 420 *Sewer Master*

CLEANS CLOGGED SEWERS FAST!

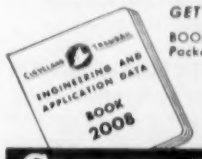
See your nearby Oster Selective Distributor for complete details.

The Oster Manufacturing Company • 1311 East 289th Street, Wickliffe (Cleveland), Ohio

For more details circle NED-915 J7 on enclosed inquiry slip

ONE *Extra* HOUR OF PRODUCTION DAILY

Many shops are getting an extra hour of production and more out of their machine tools by use of simple inexpensive overhead tramrail cranes that reduce the time to load and unload the machines. If you want greater machine productivity, check with Cleveland Tramrail.



GET THIS BOOK! BOOKLET No. 2008 Packed with valuable data

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6608 East 285th St., Wickliffe, O.

CLEVELAND TRAMRAIL

For more details circle NED-916 J7 on enclosed inquiry slip

FULL CONE—HOLLOW CONE—FLAT SPRAY

Spraco has the most complete line of nozzles available anywhere — **IN STOCK.** Capacities range from ⅛ pint/min. to 4000 gal./min. Bronze, cast iron, and stainless steel. Write for our nozzle catalog.

SPRAY ENGINEERING CO., *106 Cambridge St., Burlington, Mass.*

For more details circle NED-917 J7 on enclosed inquiry slip

WILL STAMPINGS DO YOUR JOB BETTER?

Redesign from casting to stamping cuts piece price 66%...tooling cost 53%

★**BREAKAGE ELIMINATED**—Wrought aluminum alloy gives greater strength characteristics, eliminating breakage which occurred with the original cast part.

★**MACHINING ELIMINATED**—Blanked and pierced part is complete as pictured. No additional machining of holes or top and bottom surfaces is required. End result is a better part at lower cost.

★**COST REDUCED**—Piece price reduced 66%. Original cost of the casting plus necessary machining was $1.45 each in lots of 1000. *Cost of stamping is 50¢ each.*

Tooling cost reduced 53%. Original cost of pattern and drill jig was $301.00. *Tooling for stamping cost $140.00.*

WILL STAMPINGS DO YOUR JOB BETTER?

Analyze your production parts and check with...

DAYTON ROGERS *Manufacturing Company*
MINNEAPOLIS 7E, MINNESOTA

For more details circle NED-918 J7 on enclosed inquiry slip

Compare! No Other Lift Truck can equal the performance of Automatic's New "DOCKER"

✓ Shortest, most compact truck in its class!

✓ Lowest step height—best grade clearance!

✓ Top lift and travel speeds, maximum stability!

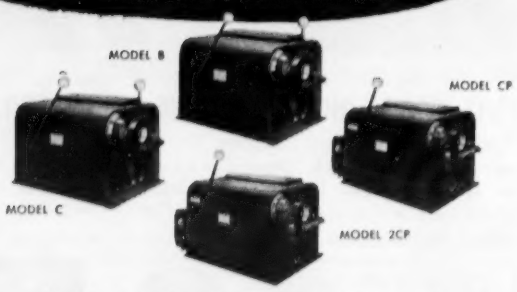
Best performing truck on the market for the trucking industry and other close-quarter materials handling, the new "Docker" is 5 ways superior! Overall length (less fork) of 53 7/8" • step height of only 7" • lift speed of 65 FPM • grade clearance of 45% • turning radius of 56". *No other* truck of its type offers so much! The "Docker" provides greater stability, too, through 4-wheel suspension and a lower center of gravity. It is available in Mono-Lift or Duo-Lift, 1,000 to 3,000 lbs. capacities.

AUTOMATIC TRANSPORTATION CO.
Division of The Yale & Towne Mfg. Co.
Dept. P7, 61 W. 87th St., Chicago 20, Ill.
WORLD'S LARGEST EXCLUSIVE BUILDER OF ELECTRIC-DRIVEN INDUSTRIAL TRUCKS

For more details circle NED-919 J7 on enclosed inquiry slip

Here's your best selection in a precision bench model tube processing machine . . .

LEONARD
TUBEMASTER



For the machine that fits your tube squaring, flaring, burring and beading needs best—consult

LEONARD PRECISION PRODUCTS CO.
9200 Bolsa Avenue • Santa Ana, California

For more details circle NED-920 J7 on enclosed inquiry slip

GEAR PROBLEMS? *Check with-* FAIRFIELD!

If you use gears in the product you make, we believe it will pay you, as it has others, to become acquainted with FAIRFIELD—the place where fine gears are produced to meet your specifications EFFICIENTLY, ECONOMICALLY! Fairfield's production facilities are unexcelled for making all kinds of accurate, automotive type gears such as are now finding wide use in all branches of industry: for tractors, trucks, and buses . . . for agricultural implements . . . for construction machinery . . . for machine tools. Ask for latest literature describing Fairfield's facilities. Your inquiry will receive prompt attention.

FAIRFIELD
Manufacturing Co.
2335 S. Concord Road
LAFAYETTE, INDIANA

For more details circle NED-921 J7 on enclosed inquiry slip

New Literature & Catalogs

Dust & Fume Eliminators

Schmieg Industries, Inc.—Combining high-velocity cyclonic action with water-curtain air washing, dust and fume eliminators afford efficient removal of contaminants from air exhausted from industrial processes. Baffles remove excess moisture before cleaned air is returned to working area. Details of this dust and fume eliminator are presented in 8-page illustrated bulletin VRU-4-57. Capacities range up to 20,000 cfm.

For more details circle NED-922 J7 on enclosed inquiry slip

Hand Stoning

Behr-Manning Co.—Pocket-size illustrated "Hand Stoning Handbook" lists and describes scores of special shapes and sizes of hand stones in natural and furnace-made types. Guidance to tool and die makers, machinists and instrument makers is provided.

For more details circle NED-923 J7 on enclosed inquiry slip

Electric Timing Devices

Haydon Mfg. Co.—30-page catalog 571 comprehensively covers line of electric timing motors, timing devices and clock movements. Products described include hysteresis, inductor, clutch, reversible, direct-current, miniature and heavy duty electric timing motors; time delay, interval and cycle timers; commercial elapsed time indicator and electric clock movements.

For more details circle NED-924 J7 on enclosed inquiry slip

Packaged Steam Generator

Erie City Iron Works—The FT fire-tube packaged steam generator described in 8-page catalog 56A features three-pass design with gas vent in the rear. It combines oil, gas or combination burner with safety controls and instrumentation piped, wired and assembled. Unit has 5 sq ft of heating surface per developed horsepower, which ranges from 50 to 600.

For more details circle NED-925 J7 on enclosed inquiry slip

Products for the Electrical Industry

Sittler Corp.—Products and equipment for the electrical industry covered in 20-page catalog include an extensive line of wire and cable, connectors and wiring harnesses, portable spot welders and wire strippers, voltage testers and commutator maintenance equipment. Request catalog No. 57.

For more details circle NED-926 J7 on enclosed inquiry slip

Vertical & Horizontal Transportation

West Bend Equipment Corp.—Multiple-level conveyor systems and between-floor production line automation in varying adaptations are covered in 8-page bulletin E-557 on "Automatic Vertical and Horizontal Transportation." Piece will aid in setting up pushbutton control of production and shipping flow, automatic storage and pick-up, quality control, package selection and rejection systems.

For more details circle NED-927 J7 on enclosed inquiry slip

CHOICE OF AMERICA'S TOP CORPORATIONS FOR KEY CONTROL

Put system into key handling with Telkee. Well-conceived systems are a must with top corporations today, and their first choice is Telkee.

WHAT IS TELKEE

Telkee is a sensible, easy-to-use system for keeping track of 100's or 1000's of keys. Because of three-way indexing, absolute control of every key and duplicate is guaranteed. Telkee saves time and money because it is the automatic key control system.

GET FULL FACTS NOW

Study the story of Telkee and see how it will solve your key problems. Obtain full facts today without obligation.

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TEL KEE *The* MOORE KEY CONTROL® *Systems*
P. O. MOORE, INC.
A SUBSIDIARY OF SUNROC CORPORATION GLEN RIDDLE, PA.

For more details circle NED-928 J7 on enclosed inquiry slip

FORD H.S.S. UNIFLUTE COUNTERSINKS

. . . . free working smooth cutting for

You'll need fewer tools for these jobs because the FORD H.S.S. Uniflute Countersink is designed to handle all three of these operations — in any hole size from the end diameter to the major diameter. The simple single flute design with cam relief does it. Eliminates chatter and secondary burrs. Low in cost, too — and easily resharpened in your own shop. We tell you how. Also available in Carbide.

WRITE FOR NEW FORD BULLETIN NO. 702

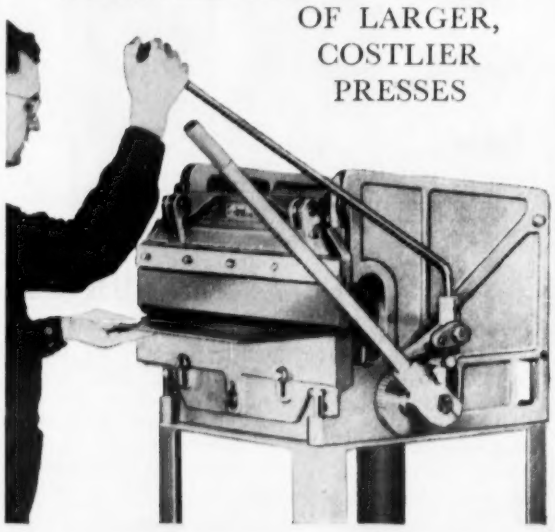
Rotary FORD Tools **M. A. FORD MFG. CO. INC.**
721 W. River St., Davenport, Iowa
Precision Manufacturer of
H.S.S. and Carbide Rotary Cutters • Carbide End Mills • Special Tools

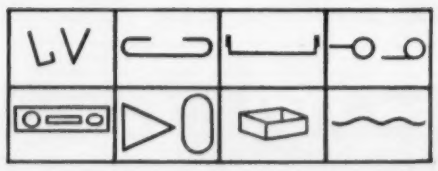
For more details circle NED-929 J7 on enclosed inquiry slip

Di-Acro Press Brake

$425.00

FORMS AND PUNCHES WITH ALL THE ACCURACY OF LARGER, COSTLIER PRESSES





Hand operated model, 24" bed and ram. Eight ton capacity provides working range of many power operated machines. Ideal for model shops and short run production. Makes angles and radius bends, curls, beads, corrugates, flanges, hems, seams, flattens, punches, blanks, draws, straightens and jogs as well as forming channels and boxes.

Lever operated roller bearing cam plus a ratchet drive to multiply power, form 16 gauge steel across full length of bed. Adjustomatic—the lever operated back gauge—provides rapid gauging of materials. Dies are interchangeable with other press brakes—special dies available. Standard dies offered in 6", 12", 18" and 24" sizes from stock.

Consult the Yellow Pages of your phone book for the name of your Di-Acro distributor or write us for catalog describing this and other Di-Acro machines.

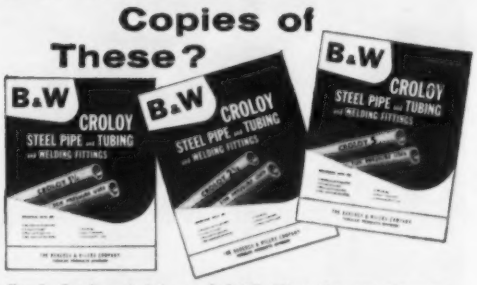
*Pronounced die-ack-ro

di-acro PRECISION METALWORKING MACHINES

O'NEIL-IRWIN MFG. CO.
354 8th Ave. • Lake City, Minn.

For more details circle NED-930 J7 on enclosed inquiry slip

Do You Have Copies of These?



Here's Condensed data on 3 B&W Alloys for pressure uses.
These bulletins contain information on Croloy 1¼ (1¼ Cr — ½ Mo), Croloy 2¼ (2¼ Cr — 1 Mo) and Croloy 5 (5 Cr—½ Mo) Seamless Welding Fittings and Seamless Pipe and Tubing. Covers such subjects as mechanical properties, creep strength, physical properties, welding, heat treatment, and working pressures. Write for any one — or all three.

Bulletin 152 on Croloy 1¼
Bulletin 145 on Croloy 2¼
Bulletin 146 on Croloy 5

The BABCOCK & WILCOX COMPANY
TUBULAR PRODUCTS DIVISION • FITTINGS DEPARTMENT
3839 W. BURNHAM STREET • MILWAUKEE 46, WISCONSIN

For more details circle NED-931 J7 on enclosed inquiry slip

NOW! A TRULY VERSATILE STANDARD KILN TYPE OVEN

MOCO has incorporated many custom, money-saving features into this standard oven — using gas fuels or electricity.

They offer *maximum temperature uniformity* and *complete safety equipment* at amazingly low initial cost. You can depend fully on a MOCO-engineered product!

MORE INFORMATION?
If you are in the market for a standard oven, be sure and send for this informative brochure.

MICHIGAN OVEN COMPANY
419 Brainard, Detroit 1, Mich.

For more details circle NED-932 J7 on enclosed inquiry slip

DUO Safety

ALL ALUMINUM LADDERS

. . . GOOD FOR A LIFETIME OF DEPENDABLE SERVICE

Type F— Extension Ladder

Here's the ideal ladder for all types of plant maintenance work. The strength, lightness and non-rust qualities of aluminum combine with the most exacting engineering and manufacturing processes to provide a ladder that will deliver a lifetime of safe, dependable service. There are Duo-Safety aluminum ladders in all types . . . step, folding, extension. Your inquiry will receive prompt attention.

WRITE FOR FREE CATALOG

DUO-SAFETY LADDER CORP.
809 9th St., Oshkosh, Wis.

For more details circle NED-933 J7 on enclosed inquiry slip

New Processes & Materials

BRAZING FLUX
for high temperature silver alloys

Suited for silver alloy brazing at higher-than-normal temperatures and for brazing under conditions requiring prolonged heating, Black Label Sil-Flux absorbs refractory and nonrefractory oxides and is chemically active from 1100° to 1800° F. Its non-crystallizing fine-grain structure promotes complete wetting and free flow. It is particularly suited for induction brazing of stainless steel and other ferrous and nonferrous metals. Made by **United Wire & Supply Corp.**, Dept. 2-B, 1497 Elmwood Ave., Providence 7, R. I.

For more details circle NED-934 J7 on enclosed inquiry slip

NONFLAMMABLE GREASE
withstands extreme pressures

Capable of lubricating under high temperatures as well as heavily loaded bearings, No-Flame nonflammable grease cannot melt and incorporates a nonflammable synthetic fluid. It can be used at temperatures that would ignite conventional oils and greases. It is water-white in color and can be identified for special applications. Made by **Bel-Ray Co.**, Dept. 104, Green Village Rd., Madison, N. J.

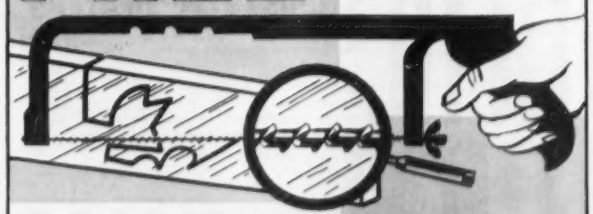
For more details circle NED-935 J7 on enclosed inquiry slip

NONSLIP COATING
applied by brush, spray or roll

Accidents and injuries caused by slippery footing can be prevented by use of NSC, a nonslip coating that is applied by roll, spray or brush to any hazardous surfaces. Compounded of plastic resins and polymerized oils with aluminum oxide granules in suspension, the product resists 2000° F without flaming. It is waterproof and cleans with soaps, powders or detergents. Traction is maintained under oil and grease. Available in light and dark gray, red and green. Made by **Walton-March**, Dept. OK, 1935 Sheridan Rd., Highland Park, Ill.

For more details circle NED-936 J7 on enclosed inquiry slip

FREE TO INDUSTRIAL USERS . . .
(Limited Time Only)



Demonstrate for yourself the big advantage of now being able to saw up or down, left or right, or in circles with Tyler SPYRAL Hacksaw, Coping Saw and Bandsaw Blades.

Saw any material including metal, wood, plastic, tubing, etc. without chipping or tearing. Blades are of rugged spring tempered steel, hardened for maximum cutting life. SPYRAL Bandsaw Guides & Blades available for Delta 14" Bandsaws and all DO-ALL machines.

Since your FREE blade will be distributed by your industrial supplier, it is imperative that you include his name in coupon.

Tyler SPYRAL HACKSAW BLADE!

MAIL COUPON FOR FREE SAMPLE

TYLER MANUFACTURING CO., INC. Dept. D-9
1005 W. Arbor Vitae Ave., Inglewood 7, Calif.
Please send FREE sample SPYRAL HACKSAW BLADE and full information about all Tyler Products.
Name _____
Company's Name _____
Address _____
City & State _____
My Industrial Supplier is _____

For more details circle NED-937 J7 on enclosed inquiry slip

HANNA
Fluid Power CYLINDERS give you
POWER FOR PRODUCTION

■ Hanna Pneumatic and Hydraulic Cylinder power helps cut costs and increases production by replacing manual operations with perfectly controlled power. Hanna Fluid Power Cylinders are available for air operation up to 250 psi., hydraulic up to 750 psi., in a variety of sizes and mounting styles. ***WRITE FOR CATALOG 750B***

HANNA ENGINEERING WORKS
HYDRAULIC AND PNEUMATIC EQUIPMENT . . CYLINDERS . . VALVES
1759 Elston Avenue, Chicago 22, Illinois

For more details circle NED-938 J7 on enclosed inquiry slip

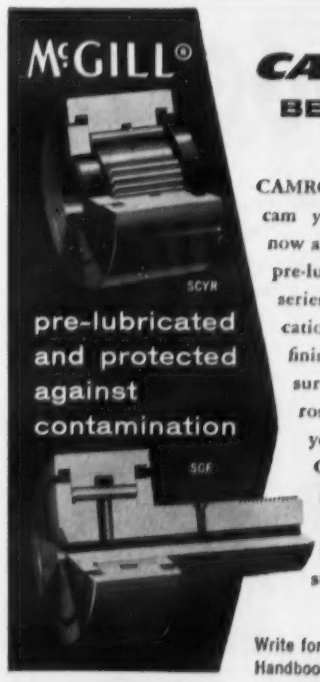
NEW HANDBOOK OF SMALL TOOLS AND ACCESSORIES

Here is our new, enlarged catalog with 1375 different items listed and described — more than 230 illustrations. Such essential tools as cutters, vises, arbors, rotary tables, chucks, collets, master copy type and other tool room and production line necessities are all within the covers of this 52-page book. Yours without obligation on letterhead request.

GORTON

GEORGE GORTON MACHINE CO.
1909 Racine St. Racine, Wis.

For more details circle NED-939 J7 on enclosed inquiry slip



sealed CAMROL® BEARINGS

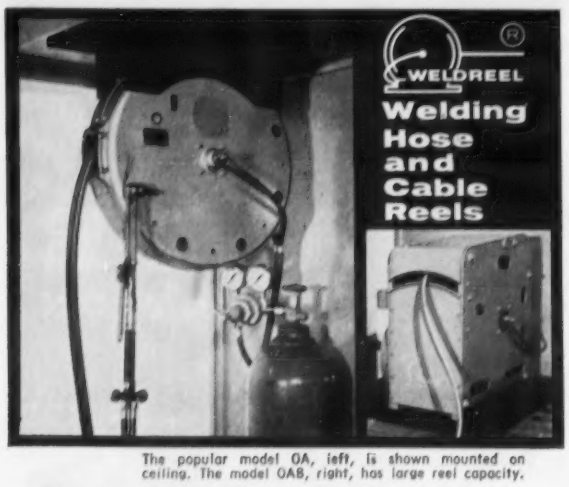
CAMROL cam follower and cam yoke roller bearings are now available in the sealed and pre-lubricated SCF and SCYR series for your critical applications. A black ferrous oxide finish protects all external surfaces from rust and corrosion. For stud-, shaft-, or yoke mounting use sealed CAMROL bearings to avoid frequent re-lubrication and contamination in cam action or guide and support roller applications.

Write for helpful bearing Handbook No. H-54-B

McGILL® *precision needle bearings*

McGILL MANUFACTURING CO., INC.
101 N. LAFAYETTE ST. VALPARAISO, INDIANA

For more details circle NED-940 J7 on enclosed inquiry slip



The popular model OA, left, is shown mounted on ceiling. The model OAB, right, has large reel capacity.

Keep hose and cable off the floor when not in use—increase plant safety. Greatly extend hose and cable life—save on replacement cost.

Hose or cable is paid out freely from a WELDREEL unit and locks at any desired length. A slight tug releases the locking pawl and a spring rewinds hose or cable onto reel.

Available in Models to hold from 40′ to 150′ of double hose, 50′ of single hose, or 100′ of cable.

Write for complete information.

UNITED SPECIALTIES, INC.
P. O. BOX 698 EL DORADO, ARKANSAS

For more details circle NED-943 J7 on enclosed inquiry slip

announcing 2 NEW

DE-STA-CO

TITAN Toggle Clamps!
(Models 557 and 558)

- THE ULTIMATE IN RUGGED CONSTRUCTION
- completely replaceable parts
- forged steel components
- 4,000-lb. holding pressures
- weight of 4½ pounds!

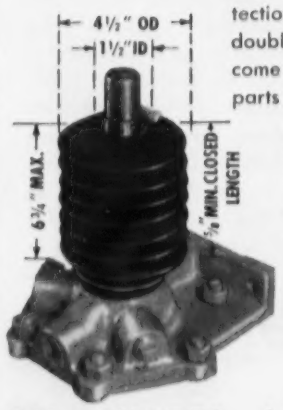
(Model 557 is the same as Model 558 except that Handle-angle provides complete clearance)

Send for **FREE Literature** on these new DE-STA-CO Titans—Models 557, 558!

DE-STA-CO **DETROIT STAMPING COMPANY**
WORLD'S FIRST LINE OF TOGGLE CLAMPS
360 Midland Avenue • Detroit 3, Michigan

For more details circle NED-944 J7 on enclosed inquiry slip

PROTECTED by GORTITE



GORTITE is the new pliable protection that flexes normally on double-thick convolutions to overcome the weaknesses of molded parts and leather: 1 or 1000 parts made to your specifications without molds! It pays to cover spindles, ways and crossrails the GORTITE way. Ask for new bulletin AH-3. A&A Mfg. Co. Inc., 712 S. 12th St., Milwaukee 4, Wis.

ALL SHAPES AND CONTOURS

For more details circle NED-945 J7 on enclosed inquiry slip

New Literature & Catalogs

Miniaturized Automatic Control

Assembly Products, Inc., San Gorcinto Div.—Automatic control with miniaturized nonindicating meter-relays is subject of 12-page catalog 104-A. New model 126 has a sensitivity beginning at 0.2-mu a or 0.1-mv, yet it withstands shock and vibration up to 20 g.

For more details circle NED-946 J7 on enclosed inquiry slip

Shipping-Packaging Services

AAcon Contracting Co.—Outdoor storage space, variety of highway and material handling trucks and trailers, warehouse facilities, export packing and related facilities for storage and handling of all types of equipment for export shipping are described in detail in 32-page plastic-bound brochure.

For more details circle NED-947 J7 on enclosed inquiry slip

Pneumatic Conveyor

Fuller Co.—Operation of the Airveyor, as used in pulp and paper mill industry for handling process chemicals, chips, sawdust and hog fuel, is related in 12-page bulletin A-17. Typical layouts of this pneumatic conveyor system in various plants are shown.

For more details circle NED-948 J7 on enclosed inquiry slip

Locking Sealant for Threaded Fasteners

American Sealants Co.—Technical Report No. 5 explains how to lock threaded fasteners with Locktite Sealant. Specific uses and methods of application of this sealer-adhesive are given for studs, screws, nuts and other threaded products. Also described are techniques for sealing and soldering sleeve joints.

For more details circle NED-949 J7 on enclosed inquiry slip

Foot-Operated Switches

Linemaster Switch Corp.—Forty models of Hercules switches in heavy duty, water-tight, explosion-proof and direct-current types are described in 4-page bulletin. Ratings and contact arrangements are available for practically every need.

For more details circle NED-950 J7 on enclosed inquiry slip

Alloy Spring Wire

Techalloy Co.—Selector guide for nickel alloy spring wire discusses five methods of heat treatment used to process springs made of this material. Chart lists temperature and time for stress equalizing and age hardening 13 types of alloys.

For more details circle NED-951 J7 on enclosed inquiry slip

How Porcelain Enamel Protects

Erie Enameling Co.—Industrial porcelain enamel as a protective finish for industrial equipment and components is discussed in 20-page booklet 657C. Special formulas are described for applications requiring resistance to corrosion, abrasion, heat, thermal shock and other extreme conditions. Elements of design and fabrication are covered.

For more details circle NED-952 J7 on enclosed inquiry slip

HERE THEY ARE!

THE WORLD'S FINEST INDUSTRIAL HEATERS

Gas fired Panelbloc radiant heaters "heat like the sun"—but do a more consistent job. You can enjoy their healthful heat twenty-four hours a day! Automatic. Easy installation. Burns any commercial type gas. Send for information.

PANELBLOC

Take a Cook's tour around the world and you'll find Thermobloc warm air heaters wherever you go. Manufactured and sold in 27 countries. Oil or gas fired. Economical, and they are made in a complete range of sizes for open area heating. No pipes or duct work needed.

THERMOBLOC

Thermobloc Div., Pratt-Daniel Corp. 2 Meadow St., So. Norwalk, Conn.
Canadian Affiliate: T. C. Chown, Ltd., Montreal • Toronto
Please send bulletins on ☐ Panelbloc ☐ Thermobloc 7-9
Name .....
Address .....
City ..... State .....

For more details circle NED-953 J7 on enclosed inquiry slip

OFF-THE-SHELF INSTRUMENTATION

When you need an instrument fast, it pays to take advantage of Fischer & Porter's off-the-shelf instrumentation plan. Stock shelves in Hatboro, Chicago, Houston, and Los Angeles carry an ever increasing selection of quality F & P flowmeters, transmitters, indicators, recorders, controllers, and chlorinators ready for immediate delivery. Complete prices, specifications, and availability data are in Catalog 2, free on request. Write Fischer & Porter Company, 3597 County Line Rd., Hatboro, Pa.

FP **FISCHER & PORTER CO.**
Complete Process Instrumentation

For more details circle NED-954 J7 on enclosed inquiry slip

Formica S-52

8 ways better for forming dies

"We cut our die forming time from 4 months to 4 weeks when we switched from steel to Formica S-52 die stock," declares Stephen Chojnacki, general foreman, Aircraft Div. plant, Twin Coach Corp.

1. Formica S-52 laminated plastic die stock is faster, cheaper and easier to machine.
2. Light in weight, it's easier to handle and move.
3. Longer die life – some dies in use at Twin Coach for 4 years, withstand pressure up to 10,000 psi.
4. Rejects reduced from 50% with steel dies, to nothing with S-52 which prevents metal in dies from flaking off.
5. Takes deeper tooling – although easily machined, S-52 retains rigidity.
6. Prevents sticking, retains lubricant.
7. Eliminates tool drawings – die makers work directly from templates.
8. Offers more surface per pound per dollar.

Manufacturers interested in better, faster and cheaper forming of non-ferrous metal, plastic, wood, rubber, vulcanized fibre and other ductile materials – should check Formica S-52. Send today for your free copy of bulletin 604. Formica Corporation, subsidiary of American Cyanamid, 4551-7 Spring Grove Ave., Cincinnati 32, Ohio.

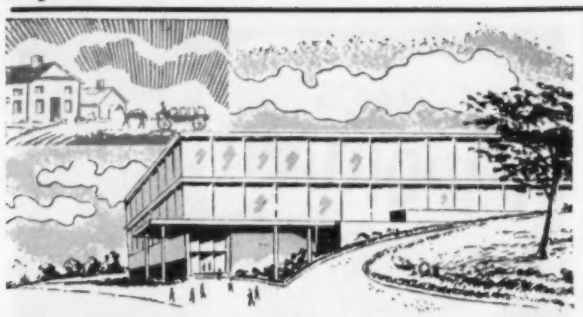
Save your engineers — use Formica-4, the complete laminated plastics service

1. Application engineering
2. Research
3. Fabricating
4. Customer stock service

Subsidiary of CYANAMID FORMICA 4

FI-1422A

For more details circle NED-955 J7 on enclosed inquiry slip



WILL YOUR PUMPING BE MODERN TOO?

When modernizing your plant and equipment, you can cut costs by installing positive displacement Viking Rotary Pumps. You can pump liquids ranging from LP-Gas to tar and molasses with self-priming Vikings. You can eliminate uncertain, troublesome gadgets, extra piping, auxiliary equipment, etc.

One Viking does your pumping job from start to finish, requiring low horse power and delivering high efficiency.

Vikings have stood the test of time. Many have records of 10, 20, 30 and even 40 years with little or no maintenance. Over the years, Vikings have been improved to meet new problems and to give still better pumping service. For the pumps that will save you money and modernize your pumping, specify Vikings. Ask for bulletin 57Sg today.

VIKING — the leader, not a follower, in Rotary Pumps

VIKING PUMP CO.
Cedar Falls, Iowa, U.S.A. In Canada, it's "ROTO-KING" pumps

See our Catalog in Sweets Plant Engineers File

▲ For more details circle NED-956 J7 on enclosed inquiry slip ▲

Speeds Soldering

LA-CO® FLUX-STIK

Self-Cleaning • Non-Acid • No Running

Just a few strokes of the stik does the trick. There's no mess . . . no waste. Powerful fluxing action goes right through oily and rusty surfaces. No tedious cleaning or wire-brushing . . . assures a perfect union of solder and metal. Safe to use . . . will not pit or corrode metal. **For all Soft Solders.**

Ask your supplier for LA-CO FLUX-Stik . . . *or write us for sample.*

Also in paste and liquid form. Other LA-CO Fluxes for all specialized needs. Write our Engineering Dept. for free help on your flux problems.

LAKE CHEMICAL CO.
LA-CO BRAND
3053 W. Carroll Ave., Chicago 12, Ill.

▲ For more details circle NED-957 J7 on enclosed inquiry slip ▲

BACHMAN 4-WAY

5-PORT VALVE
S-845 110 V.
$16.75

For control of double acting cylinders, separate exhaust ports give speed control in either direction or, if center port is used for exhaust, high and low pressures may be used for power and return cycle.

Thousands Now Used and Approved by Leading Industries

Bachman valves get quickest acceptance from top-flight engineers! They find significant savings and new standards of dependability for large capacity, direct acting valves. Performance proves continued speed and efficiency after millions of cycles.

Illustrated model has 5/16" diameter orifice, ¼" pipe ports, is 8" long and weighs 2 lbs. Inrush current 4 amperes, holding 25 watts. Pressures to 200 psi. Other models and ½" pipe size valves also shipped from stock.

Winner of 1957 Materials and Methods Design Award

Light weight phenolic laminate and aluminum construction cushion shock and provide amazing durability in rapid cycling operations.

Try one of these valves for 30 days in your plant without obligation. Complete engineering specifications sent free of charge.

JOHN D. BACHMAN & COMPANY

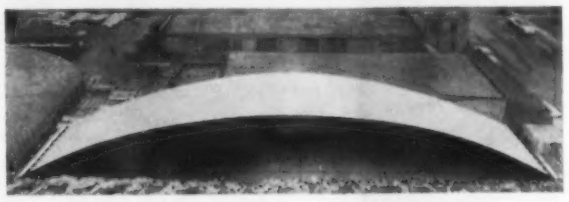
2300 SPARGER LANE • BRISTOL, TENNESSEE

▲ For more details circle NED-958 J7 on enclosed inquiry slip ▲

New Processes & Materials

TRUSSLESS STEEL ROOF
is self-supporting on 150-ft span

Consisting of specially fabricated 14-gage steel panels secured by nut and bolt fasteners to form self-supporting arches, Truss-Skin roof system will cover an



unobstructed span of up to 150 ft. Each panel of the arch segment is 2 ft wide and 10 ft long. Pre-engineering fabrication speeds erection, and cost is reportedly lower than other roof structures. Roof systems are available in widths from 80 through 150 ft in any desired length. Made by **Wonder Building Corp. of America,** Dept. NED, 30 N. LaSalle St., Chicago 2, Ill.

▲ For more details circle NED-959 J7 on enclosed inquiry slip ▲

OXIDE SCALE PREVENTIVE
used on parts to be stress relieved

Oxide scale formation on ferrous parts during stress relieving operations is prevented by use of Protect-O-Metal No. 2 compound. Developed as a welding spatter preventive, it is thinned with water and painted or sprayed on the part prior to placement in the furnace for normal heat treating. Removal is by wet or dry rag or brush after cooling. It prevents scale up to 1500° F in heating cycles of any length. Made by **G. W. Smith & Sons, Inc.,** 1702 Spaulding Rd., Dayton 3, O.

▲ For more details circle NED-960 J7 on enclosed inquiry slip ▲

NYLON COMPONENTS
include gears, washers and bearings

Molded nylon spur gears, thrust washers and metal adaptors for nylon sleeve bearings are available from stock in a wide range of sizes and types. Gears are offered in 48 and 32 pitches with 3/32 and ⅜-in. bores. Unit-molded gear and pinion combinations are made in 48-pitch with 12, 14 or 16-tooth pinions combined with 36 to 80-tooth gears. Thrust washers of 1/16-in. nylon range in size from ⅛-in. ID x ⅜-in. OD to 1½-in. ID x 3-in. OD. Adaptors for nylon sleeve bearings are made from steel, brass, bronze, and aluminum. Made by **Climax Metal Products Co.,** 866-N E. 140th St., Cleveland 10, O.

▲ For more details circle NED-961 J7 on enclosed inquiry slip ▲

PRODUC-TROL Visual Control
not only schedules,
But **automatically checks with TIME, LINE and COLOR control**

- Original cost and upkeep low.
- Schedules and time checks operations.
- Historical record to back it up.
- Bad situations show automatically.
- Its simplicity has put it into world-wide use.
- Analyze 100 items in 10 seconds.

Effective Tools for Effective Management
WASSELL ORGANIZATION, INC. Westport, Conn.

Phone CA7-4111 or write for Free PRODUC-TROL Booklet NED
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ADDRESS ____
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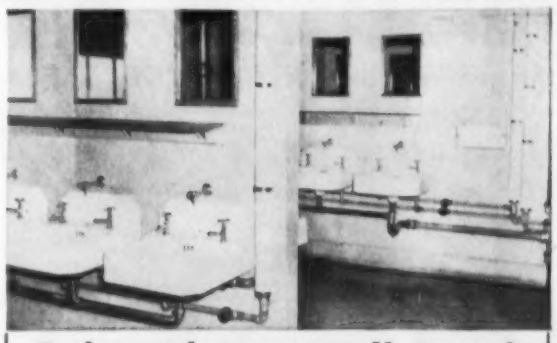

Ruberoid Stonewall Board
KEEPS MAINTENANCE COSTS DOWN

The walls of this plant washroom prove again the economy of Ruberoid Stonewall Board for in-plant partitioning. Made of asbestos-cement, Stonewall is ideal for wall surfaces where excessive dampness and corrosion shorten the life of other materials.

Industrial maintenance men everywhere are learning that it pays to use fireproof, rot-proof Stonewall Board for all interior partitioning. Since it never needs painting—no matter what its location—Stonewall means big maintenance savings year after year.

Investigate the benefits of Stonewall Board yourself. Write for details about its low cost installation and no-cost maintenance.

The RUBEROID Co.
500 Fifth Ave., New York 36, N. Y.

ASPHALT AND ASBESTOS BUILDING MATERIALS

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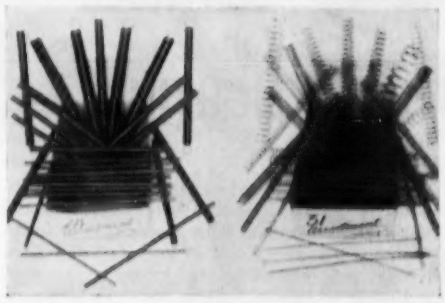
Stock SPRING assortments



Our #28 (extension) and #31 (compression) Spring Assortment folders are now available and yours for the asking. Ideal for tool rooms and maintenance work.

To overcome the faults of ordinary assortments, which seem to contain "every spring except the one needed", design efforts were not confined to the springs alone; rather, loadings and dimensions were analyzed to assure the user of greater probability in having the correct spring on hand, whatever the application.

We also manufacture to special order.

Send samples or prints for quotation.

PARAGON SPRING COMPANY
4619 W. Fulton St. • Chicago 44, Ill.

▲ For more details circle NED-964 J7 on enclosed inquiry slip ▲

KODAGRAPH MICRO-FILE EQUIPMENT

Here's everything you need for a low-cost, trouble-free microfilming operation . . . one that will meet *your* individual requirements.

- **Kodagraph Micro-File Machines**—three separate models designed to meet a variety of conditions. *Each* a high-precision unit which can be operated by anyone.

- **Kodagraph Micro-File Film**—extremely fine grained, high resolution. Assures sharp, crisp rendering of all details.
- **Kodagraph Film Readers,** which permit you to view your films quickly, conveniently.
- **Kodagraph Micro-File Enlarger,** which enables you to make paper enlargements from 16mm. and 35mm. microfilms which are comparable in clarity to the originals.
- **Kodagraph Print Film**—ideal for making positive copies of negative microfilm records.

***Write today** for new booklet—"Kodagraph microfilming for new economies in record keeping."*

EASTMAN KODAK COMPANY
Graphic Reproduction Sales Div.
Rochester 4, N. Y.

▲ For more details circle NED-965 J7 on enclosed inquiry slip ▲

MicroRold 430
the general utility STAINLESS STEEL

Since 430 meets military specifications, why not investigate this grade for your product

This straight chromium stainless grade possesses desirable qualities of beauty, corrosion resistance, strength, long life and low maintenance that are also of value in many civilian applications. More than 50% of all stainless applications could satisfactorily employ 430 stainless as an economical and practical material. Type 430 stainless costs 10¾ cents per pound less than the 18-8 grade. Some of our customers are already saving more than $215 per ton using our MicroRold 430 stainless sheet. Why not investigate the possibilities of this general utility 430 stainless.

Send today for your copy of our 24-page booklet, "MicroRold 430 Stainless Steel Handbook."

Washington Steel *Corporation*
9-CC WOODLAND AVENUE, WASHINGTON, PA.

For more details circle NED-966 J7 on enclosed inquiry slip

63300C

PHOTOELECTRIC CONTROLS for OUTDOOR LIGHTING

64401

Fisher-Pierce photoelectric controls provide dependable, automatic control of lights regardless of time of day, season or weather. Lights are switched on at the same daylight value each day, off when daylight returns. Non-mechanical, they never need setting or re-setting, even after power failures. The basic F-P circuit has proven dependable, rugged and trouble-free by more than nine years' use, in controlling lights on aircraft obstructions, signs and in store windows; in parking, loading and storage areas; in street lighting and other installations. Load capacities from 300 to 6000 watts; integral and auxiliary protective devices; wide variety of mounting arrangements; SPST, SPDT, DPST contacts; turn-on settings from 1 to 500 foot-candles.

Write for descriptive bulletins, outlining your requirements.

THE FISHER-PIERCE CO., INC.
86 PEARL STREET, BOSTON 55, MASS.

For more details circle NED-967 J7 on enclosed inquiry slip

Get the Advantages of READY-POWER on Your Electric Industrial Trucks

Get Live Power for Walkie Trucks. Ready-Power's bantam model "W" offers a variety of idling speeds and easy accessibility.

Work Your Fork, Platform, Tractor Trucks 'Round the Clock. Ready-Power gas-electric and LPG-electric units give continuous, full power all the time.

Take a tip from the owners of industry's biggest trucks . . . power them with Ready-Power diesel-electric for maximum stamina, dependability, and lowest operating costs.

Your Truck is No Better than its Power . . . Write for information.

READY-POWER
The READY-POWER Co., 3832 GRAND RIVER AVE., DETROIT 8, MICH.
Manufacturers of Gas and Diesel Engine-Driven Generators and Air Conditioning Units; Gas and Diesel-Electric Power Units for Industrial Trucks

For more details circle NED-968 J7 on enclosed inquiry slip

New Literature & Catalogs

Proving Rings & Their Use

Morehouse Machine Co.—"The A-B-C's of Accuracy in Weighing and Force Measurement Systems" is a 12-page primer-type brochure which explains proving rings and their use. Booklet points up advantages of proving rings in maintaining accuracy of various industrial systems which depend upon force measurement.

For more details circle NED-969 J7 on enclosed inquiry slip

Industrial Noise

Sigma Engineering Co.—"Why Must This Be?" is title of 14-page pocket-size booklet which evaluates industrial noise, its effect and recommended cures, and a new approach to solving the hearing loss problem. It describes the Lee Sonic Ear-Valv, a mechanical hearing protector which reduces the energy of noise without destroying its identity.

For more details circle NED-970 J7 on enclosed inquiry slip

Gearmotors & Package Drives

Westinghouse Electric Corp.—Horizontal, vertical, right-angle, open, enclosed, explosionproof, alternating and direct current gearmotors and package drives are illustrated with their respective reduction ratios and output speeds in 8-page booklet DB-3650. Gearmotors are designed in accordance with AGMA classes I, II and III, and range in speed from 7.5 to 780 rpm.

For more details circle NED-971 J7 on enclosed inquiry slip

High-Vacuum Equipment

Consolidated Electrodynamics Corp., Rochester Div. —24-page general catalog 1-1 on high-vaccum equipment for laboratory and industrial applications covers high vacuum pumps, valves and baffles, gages, leak detectors, pump fluids and greases, stills, metallizing equipment, furnaces and processing equipment for the electronic industry. Vacuums range down to 1 x 10^{-8} mm of mercury.

For more details circle NED-972 J7 on enclosed inquiry slip

Eyelets, Ferrules & Terminals

Waterbury Companies—Copper, brass and steel stampings; flat flange, rolled flange and special eyelets; standard and special ferrules; and a wide range of wire terminals for electrical use are listed and shown in 12-page 1957 catalog.

For more details circle NED-973 J7 on enclosed inquiry slip

Electrical Tubing

Minnesota Mining & Mfg. Co., Irvington Div.—Price information on every available size and type of electrical tubing, as well as properties of each and application information is provided in 16-page "Pricing Guide." Selector chart for plastic tubing contains application information and lists operating temperatures, brittle point, durometer hardness, dielectric strength and constant, shrinkage, moisture absorption, flammability and fungus resistance.

For more details circle NED-974 J7 on enclosed inquiry slip

Weckesser

black NYLON Snap Clips for cables, tubing, etc.

Instant attachment
. . . no screws or fasteners needed

All the advantages of Nylon . . . a non-corrosive, non-conductor . . . plus the low cost of quick assembly. Just pinch, insert in hole, let go. Several sizes in stock, others being added.

Weckesser COMPANY
5707-09 Northwest Hwy. • Chicago 30, Ill.

For more details circle NED-975 J7 on enclosed inquiry slip

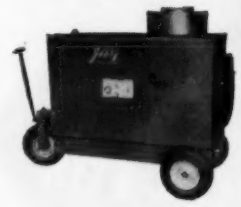
HERE'S IMPORTANT GEAR NEWS!

See how you can get increased gear life and greater capacity in less space . . . with the hardest, toughest, most accurate industrial gears made . . . and reduce costs at the same time!

Send for this free folder now!
FOOTE BROS. GEAR AND MACHINE CORPORATION
4545 S. Western Blvd., Chicago 9, Ill.
Dept. NE
FOOTE BROS.

For more details circle NED-976 J7 on enclosed inquiry slip

"TOOL UP" for your cleaning jobs
PREVENT FIRES



with HYPRESSURE Jenny STEAM CLEANER

You'll find a new source of savings and profits, plus greater plant safety, when you "tool up" for cleaning jobs with Hypressure Jenny Steam Cleaner. Jenny removes grease, cutting oils, and protective coatings from machinery, equipment, sub-assemblies, and castings, before repair, repainting or machining—ten times faster than by ordinary methods! It promotes safety by eliminating the fire hazard of greasy conveyor chains and floors, and the use of inflammable cleaning solvents. It cleans ribbed glass windows; keeps floors and runways free of dirt and grease for safer, faster plant traffic, and often reveals damaged or worn parts for repair before production delays or breakdowns occur. Jenny does most any cleaning job for one-tenth the cost of cleaning by hand. So find out how easy it is to bring these savings and safety to your plant.

Send for Catalog today for full facts.

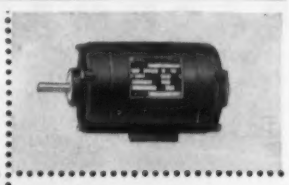
HYPRESSURE JENNY DIVISION
HOMESTEAD VALVE MANUFACTURING CO.
"Serving Since 1892"

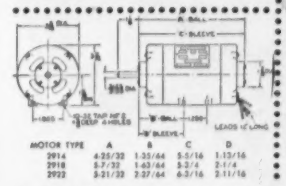
P. O. BOX 84 CORAOPOLIS, PA.

For more details circle NED-977 J7 on enclosed inquiry slip

THIS HOWARD INDUCTION MOTOR

Rated 1/100 to 1/15 H. P.





FITS A WIDE RANGE OF APPLICATIONS

Available in several models, Howard 2900 capacitor type motors are used for applications requiring quiet operation, minimum vibration, minimum maintenance, long life and overall uniform performance.

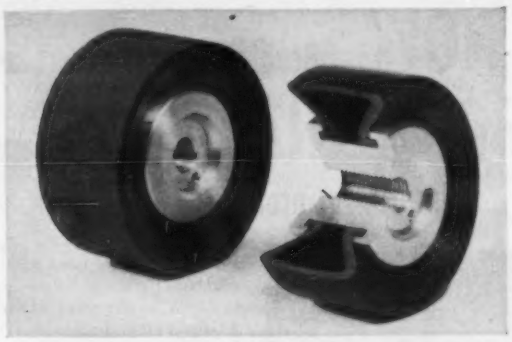
DESCRIPTIONS & APPLICATIONS

(1) Non-Synchronous Capacitor Motors (Types RBC and RWC)—For laboratory equipment, vending machines and general service.
(2) Standard Synchronous Capacitor Motors (Types SBC and SWC)—For tape pulling, sound cameras, telegraph-terminal equipment and other applications requiring a constant speed motor.
(3) Hysteresis Synchronous Capacitor Motors (Types HBC and HWC)—Ideal for recording and facsimile equipment. When equipped with sleeve bearings, these motors are the ultimate in quiet operation and low rumble level. Can be supplied as 2 or 3 speed synchronous motors.
(4) Torque Motors—high resistance rotors (Types RBH and RWH)—For take-up reels and use where high starting loads are encountered. The speed varies with load changes.

Howard 2900 Motors are available as: 1, 2, or 3 phase capacitor; split-phase (synchronous and non-synchronous).
Available with gear heads with a wide range or gear ratios. Write today for complete data.

HOWARD INDUSTRIES, INC., 1740 State St., Racine, Wis.
Divisions: Electric Motor Corp. • Cyclohm Motor Corp. • Racine Electric Products

For more details circle NED-978 J7 on enclosed inquiry slip



NU-MATIC ANNOUNCES NEW PRINCIPLE IN INFLATED GRINDING WHEELS

The new "Aircore" design consists of only TWO parts . . . the drum and the core. And, it is SELF SEALING . . . as the hollow rubber drum is inflated it automatically makes positive, leak-proof contact with the metal core.

Check these PLUS features:

PRECISION OPERATION. Wheel always runs true because rubber drum seats on accurately machined ledge of core. Vibration-free operation.

FEWER PARTS TO STOCK AND MAINTAIN. No nuts, bolts or sideplates.

TROUBLE-FREE CORE. Made of machined aluminum. Can't break, crack or leak. Will last a lifetime.

Three models are available: 3" diameter x 2" width, 4" diameter x 2" width, 5" diameter x 3½" width.

WRITE FOR COMPLETE SPECIFICATIONS. Also, ask about Nu-Matic's new "Flexcore" . . . an expanding-type grinding wheel with replaceable rubber segments.

NU-MATIC GRINDERS, INC.

8224 Carnegie Ave. Cleveland 3, Ohio

▲ For more details circle NED-979 J7 on enclosed inquiry slip ▲

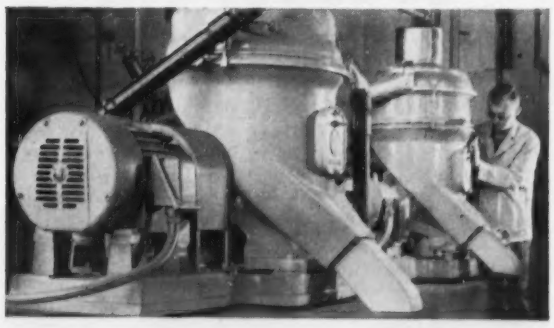
The Bellows "Super-Speed" Air Motor is six to ten times faster than conventional air cylinders of equal bore; develops tremendous power. At 100 lbs. of air will punch ½" hole through 1/16" thick mild steel. Comes complete with built-in electric or manually controlled valve. 2½" bore—stroke lengths of 4", 6", 9" and 12".

Write for Bulletin SS-5R. Address Dept. NED 957

The Bellows Co.

AKRON 9, OHIO 897-B

▲ For more details circle NED-980 J7 on enclosed inquiry slip ▲



New continuous centrifuge runs for a month without cleaning

You can feed slurries up to 35% solids by volume to the Titan Superjector continuously for as long as a month without shutdown for cleaning.

The Titan Superjector periodically ejects sludge *automatically* while running at full speed, cleans itself completely in 10 seconds.

It concentrates solids up to 40% dry weight, produces effluents clarified down to 0.00% solids. Discharges mixed solid particles up to ⅛" diameter and handles specific gravities up to 1.60.

Since there is no braking from continuous discharge of solids, power consumption can be 50% less than conventional centrifuges.

Write Dept. NED-97 for Bulletin No. 946.

THE PFAUDLER CO.
Rochester 3, N.Y.

Specialists in Corrosioneering

▲ For more details circle NED-981 J7 on enclosed inquiry slip ▲

New Processes & Materials

BONDABLE TEFLON
offered in tape and sheet form

Treatment of Teflon sheets and tapes alters the surface to make possible permanent bonding to a variety of materials with conventional commercial adhesives. Good bond strengths have been obtained between aluminum, mild steel, wood, plastic and other rigid materials. Bondable Teflon can be used for lining or covering chutes, rolls, tanks, pipe, ducts and for facing valves and machined parts where the antisticking quality on the exposed surface is desired. Made by **Abbott & Biddle,** 2417-X44 Federal St., Philadelphia 1, Pa.

▲ For more details circle NED-982 J7 on enclosed inquiry slip ▲

PROTECTIVE MASONRY COATINGS
three maintenance products seal, waterproof, and protect surfaces

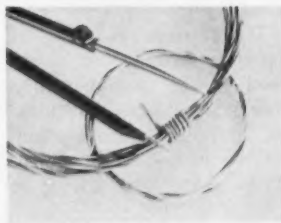
Three masonry coating compounds are available for protection of cement and concrete against specific hazards. Sika-Kote is a cementitious powder that is mixed with water. It protects interior and exterior masonry walls above and below grade against water penetration, and it also decorates with a single brush coat. Nondusting, it bonds securely to surface, and is available in twelve colors and white.

Sika-Gard liquid floor hardener impregnates concrete surfaces to form a hard chemical compound that prevents dusting, adds wear resistance, and minimizes stains from oil and grease. It is spread over floors with a long handled broom or squeegee.

Sika-Plug quick-setting sealer instantly stops leaks through masonry surfaces. This powder is mixed with water, rolled into a carrot-shaped plug, and inserted into the opening. It is also suitable for use as a mortar to fill cracks, seal wall and floor joints, anchor bolts and studs, and make emergency repairs. Made by **Sika Chemical Corp.,** 35 Gregory Ave., Passaic, N. J.

▲ For more details circle NED-983 J7 on enclosed inquiry slip ▲

HIGH TEMPERATURE WIRE
miniature insulated hook-up type



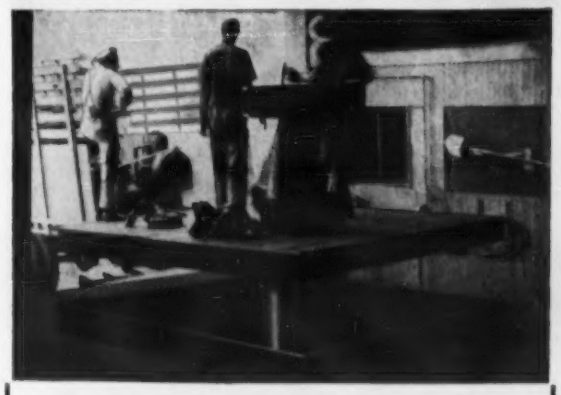
A 300-v miniature high temperature hook-up wire, with extruded Teflon insulation, is suited for airborne instrumentation and industrial uses. Insulation has a 0.003 to 0.006-in. wall thickness. Wire sizes available are 32 to 22 AWG, each offered in any of ten standard solid colors or spiral striped codings. Made by **Hitemp Wires, Inc.,** 1200 Shames Dr., Westbury, L. I., N. Y.

▲ For more details circle NED-984 J7 on enclosed inquiry slip ▲

PREPLATED METAL
chrome finish type easily fabricated

Heavy chromed finishes of unvarying quality can be given parts requiring deep draws or severe bends when this preplated metal is used. Known as specification plate on Chrom-Steel, it can be stretched without danger of drawing out the satin finish luster. Deep stretching is without disrupting grain structure or lessening corrosion resistance. Amount of plating metal for individual component parts can be varied to the particular draw and resistance to wear required. Surface is durable, resists wear, and permits frequent cleaning. Applications include kitchen accessories, automotive trim, kick plates, vents, and press formed moldings. Made by **Apollo Metal Works,** Dept. NDC, 6650 S. Oak Park Ave., Chicago 38, Ill.

▲ For more details circle NED-985 J7 on enclosed inquiry slip ▲



Comwel Platform Lifts

Speed Receiving and Delivery. Provide greater safety in handling heavy machinery, crates, barrels, castings, etc. Loads quickly raised from floor level to truck or dock height. Retracting safety skirt optional.

The COMWEL PLATFORM LIFT pays for itself many times over in saving time and manpower. Standard Model has capacity up to 10 tons. Other capacities available. Write or wire.

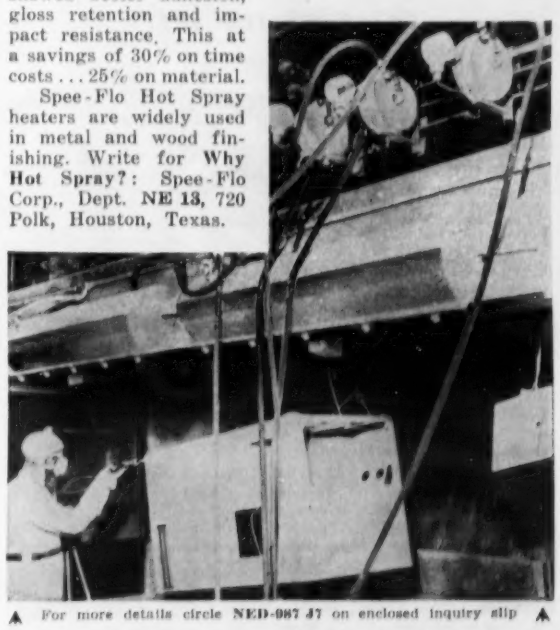
COMWEL COMPANY
2899 Norton Ave. Lynwood, Calif.

▲ For more details circle NED-986 J7 on enclosed inquiry slip ▲

Higher Quality finish, lower cost

Finishing department rejects due to small changes in temperature, humidity and paint viscosity were high until Ben Hur Mfg. Co., Milwaukee, installed hot spray heaters on the food freezer line 2 years ago. Result: not only were rejects cut 65%, but the hot spray coat showed better adhesion, gloss retention and impact resistance. This at a savings of 30% on time costs . . . 25% on material.

Spee-Flo Hot Spray heaters are widely used in metal and wood finishing. Write for **Why Hot Spray?:** Spee-Flo Corp., Dept. **NE 13,** 720 Polk, Houston, Texas.



▲ For more details circle NED-987 J7 on enclosed inquiry slip ▲

SEALINE
Hand Sealer
For Thermo-Plastic Films

SEALS BAGS - PACKAGES - STRAIGHT or IRREGULAR SHAPES

Ideal on Polyethylene and Pliofilm

- Economical — seals direct — no intermediate materials required.
- Large comfortable grip.
- Adjustable temperature control 200° to 450° F.
- Uses only 50 Watts — operates on AC or DC.

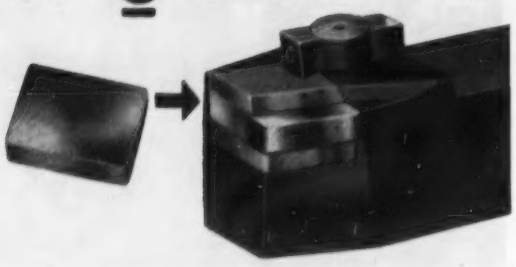
SEALINE Hand Sealer **$23.90** f.o.b. Chicago

ORDER DIRECT

SEALINE MFG. CORP.
4720 W. Lake St., Chicago 44, Ill.

▲ For more details circle NED-988 J7 on enclosed inquiry slip ▲

SINGLE INSERT GIVES YOU UP TO 8 CUTTING EDGES



in this WENDT-SONIS TOOL HOLDER

You save on tool inventory and eliminate costly diamond wheel regrinding with Wendt-Sonis tool holders and throw-away inserts. Because inserts can be indexed to ±.001", they can be replaced without removing tool holder from machine—saving on down-time, too. For free technical service, see your area Wendt-Sonis representative. Write for Catalog 57-A. Address Dept. NED-957.

WENDT-SONIS COMPANY
HANNIBAL, MISSOURI • ROGERS, ARKANSAS

For more details circle NED-989 J7 on enclosed inquiry slip

NOELTING Faultless ENGINEERED
TRUCK CASTERS
CUT HANDLING COSTS

NEW!
MEDIUM DUTY INDUSTRIAL CASTER
Cuts Handling Time —Saves Man-Hours

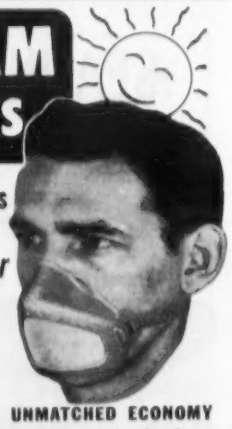
The 900 Series, all purpose, Truck Caster has heavy pressed steel horn and top plate, corrugated for extra strength. Swivels easily on *two* full rows of hardened balls rolling around *two* separate raceways. Choice of six kinds of wheels to suit load (*175 lb. to 550 lb.*) and floor surface conditions.

All the engineering "know-how" from *over half a century of specialized experience* is yours in Faultless Industrial Casters—to speed production lines, trucks, portable equipment . . . with *less time, noise, effort.* Ask for Cat. 157, no obligation.

FAULTLESS CASTER CORPORATION
Evansville 7, Indiana
Offices in Principal Cities—Canada Factory: Stratford, Ont.

For more details circle NED-990 J7 on enclosed inquiry slip

FLEX-A-FOAM DUST MASKS



Dust protection your workers will welcome and wear *in even the HOTTEST weather*

★ **Ideal for Hot Weather** Filter's porous action absorbs and actually exhales body heat.

★ Flex-A-Foam's lightweight (only 1 ounce complete) makes it cool and comfortable to wear — not hot and cumbersome like old-fashioned respirators.

★ Flex-A-Foam is easier to breathe and talk through than an ordinary pocket handkerchief — does away with that stuffy, smothered feeling.

Your best *Ounce of Protection* against Irritating Dust

UNMATCHED ECONOMY

Flex-A-Foam is the lowest priced *quality* respirator on the market today.

Flex-A-Foam's washable filter outlasts throw-away type by more than 100 to 1.

Fewer filter replacements with Flex-A-Foam Dust Masks mean fewer lost production hours.

Sample only $1.45 postpaid (Industrial price only)

FLEX-A-FOAM® DUST MASK

FLEXO PRODUCTS, INC. • Westlake, Ohio

For more details circle NED-991 J7 on enclosed inquiry slip

New Literature & Catalogs

Engineering & Manufacturing Services

Associated Engineers, Inc.—Six basic divisions of this company offer supplementary engineering and drafting talent during peak periods or on an as-needed basis. Divisions are mechanical engineering, tool engineering, industrial laboratory, special services (technical writing), and manufacturing. Eight-page brochure outlines services and facilities available, division by division.

For more details circle NED-992 J7 on enclosed inquiry slip

Guide to Mixing

Industrial Process Engineers—Mixing results can be guaranteed for any process requirement, according to procedures for selecting side-entering agitators outlined in 8-page engineering manual. Included are mechanical design details of complete line of side-entering agitators, table of standard sizes, and dimensions and guidance for selecting the right size and type of mixer.

For more details circle NED-993 J7 on enclosed inquiry slip

Packaging Procedures for Heavy Goods

Hinde & Dauch—How to cut costs, simplify packing and improve efficiency in the packaging of heavy products is explained in 28-page booklet. No. 12 in the H & D Little Packaging Library, this guide discusses such subjects as cost, weight, box assembly, product protection, warehousing and box storage.

For more details circle NED-994 J7 on enclosed inquiry slip

Uses for Thermostatic Disks

Metals & Controls Corp., Spencer Thermostat Div.—"The Story of the Spencer Disc" is a 32-page second edition of this booklet which describes how this thermostatic bi-metal disk operates. Also detailed is use of this element to actuate Klixon thermostats, circuit breakers and inherent overheat motor protectors.

For more details circle NED-995 J7 on enclosed inquiry slip

Electronic Components

International Resistance Co.—"1957-1958 Electronic Components Guide" contains condensed engineering data on the IRC line of resistors and other electronic components. JAN or MIL equivalents, rated wattage, standard tolerance, temperature rise and coefficient, maximum operating temperature, ohmic values and dimensions are given.

For more details circle NED-996 J7 on enclosed inquiry slip

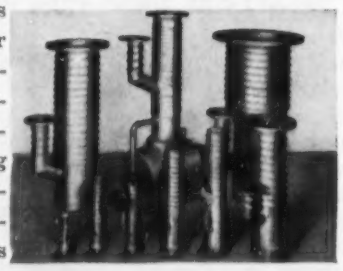
Socket Screws, Plugs & Pins

Standard Pressed Steel Co.—32-page revision of the Unbrako catalog of SPS standard socket screw products, pressure plugs and dowel pins contains size-by-size data on diameters, thread specifications, lengths, and packing and shipping information. Socket-head cap and set screws range from micro-size No. 0 set screws to 12-in. long 3-in. diameter cap screws.

For more details circle NED-997 J7 on enclosed inquiry slip

VACUUM DIFFUSION PUMPS

for dependable, low cost, high speed pumping



NRC Diffusion Pumps are unsurpassed for through-put, blank-off, for pressure tolerances. They are especially outstanding for their dependability and lower operating costs. Stainless steel body, long-life cast-in heaters and self-centering heavy walled jets cut maintenance costs.

Deliver rated performance despite variations in line voltages and cooling water characteristics. Booster and diffusion pumps available. Sizes from 1" to 16".

Write for bulletin DP-2 to **NRC Equipment Corporation** 160 Charlemont Street, Dept. 29-J, Newton 61, Massachusetts.

For more details circle NED-998 J7 on enclosed inquiry slip

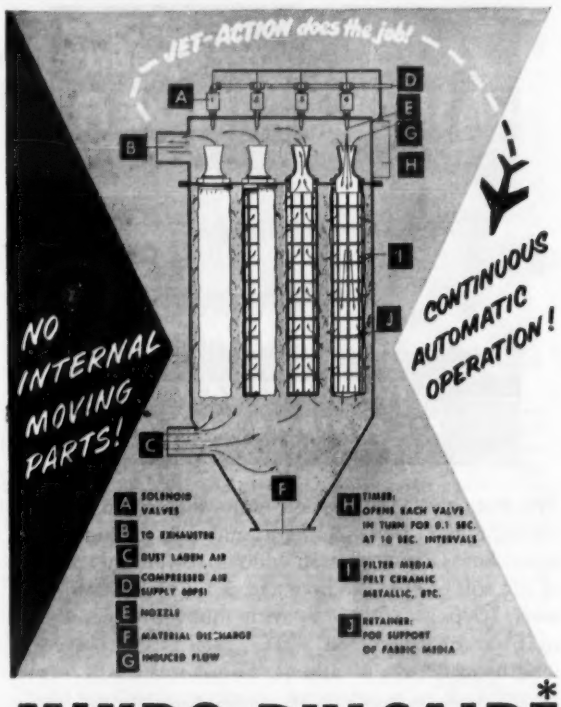
NOW... Republic Steel Lockers are BONDERIZED... to preserve fine finish, protect against rust

Bonderizing provides a superior base for anchoring enamel finish to the steel surface. At the same time it guards against the spreading of under-finish corrosion which eventually causes peeling and flaking.

You'll boost employee morale with handsome Republic industrial lockers that look better longer. Three locking systems are available. Your Berger sales representative will help with ideas . . . suggest the most economical locker for your own particular requirements. Call him or write us for literature showing specifications and prices.

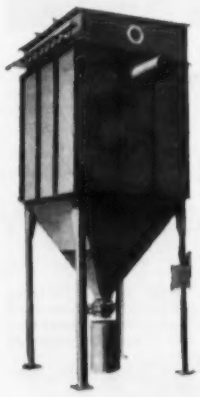
REPUBLIC STEEL
BERGER DIVISION
1034 Belden Ave., Canton 5, Ohio

For more details circle NED-999 J7 on enclosed inquiry slip



MIKRO-PULSAIRE* COLLECTOR!

There are *no internal, moving parts* in the radically new, *jet-action* MIKRO-PULSAIRE Collector! Cleaning mechanisms, with their gears, cams, chains and hoses have been entirely eliminated . . . maintenance costs are drastically reduced . . . process interruptions are avoided! This completely simplified unit is the first collector to offer *continuous, automatic cleaning* with no moving parts—*true economy in operation,* at highest filtering efficiency . . . 99.9% *plus!* You'll find full details in MIKRO-PULSAIRE Bulletin 52A. It's yours for the asking.



We'll be glad to have the Mikro Man call to show you and your plant engineers the tremendous advantages of MIKRO-PULSAIRE.

Model 48-6 MIKRO-PULSAIRE Collector—340 sq. ft. of filter area—capacities 2000-5000 cfm. A complete line for all collection jobs.

* patents applied for

Mikro-D

PULVERIZING MACHINERY DIVISION
Metals Disintegrating Company, Inc.
28 Chatham Rd. Summit, N. J.

For more details circle NED-1000 J7 on enclosed inquiry slip

USE THIS SELF-MAILER FOR MORE INFORMATION

FOLD—SEAL—MAIL

SECOND FOLD TO THIS LINE

Circle the Numbers Below corresponding to items on which you want additional information. Your request will be sent promptly to the manufacturer. Please fill in the coupon completely. We'll pay the postage.

	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
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31	81	131	181	231	281	331	381	431	481	531	581	631	681	731	781	831	881	931	981	1031	1081	1131	1181	1231
32	82	132	182	232	282	332	382	432	482	532	582	632	682	732	782	832	882	932	982	1032	1082	1132	1182	1232
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48	98	148	198	248	298	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1048	1098	1148	1198	1248
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Check Invested Capital Rating of Your Company

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- ☐ $500,000 to $1,000,000
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J-7

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- **Lower Equipment Costs —** because competitively priced Hartzell fans last much longer —cost much less per year of service life.
- **Lower Installation Costs —** because Hartzell pre-fabricated duct fans are as simple and easy to install as a section of duct work.
- **Lower Maintenance Costs —** because Hartzell's high standards of quality in design and construction practically eliminate failures under normal operating conditions.

For details, write for Bulletin A-109 or call your nearby Hartzell field engineer.

HARTZELL propeller fan co.
Div. of Castle Hills Corp.
506 Thomas Blvd. Piqua, Ohio
ENGINEERING OFFICES IN PRINCIPAL CITIES

For more details circle NED-1001 J7 on enclosed inquiry slip

Easier food handling with Hackney Seamless Containers

More and more modern food processing plants use durable Hackney containers to cut handling costs. Here's why:

- ★ **Easy to clean**—with seamless construction.
- ★ **Easy to handle**—with stout welded handles.
- ★ **Easy to move**—with tough wearing ring on bottom.
- ★ **Easy to pour**—with a full-curled lip.
- ★ **Easy to select**—with a wide range of sizes in black, galvanized, tinned or stainless steel, or aluminum. Write for catalog.

Pressed Steel Tank Company
Manufacturer of Hackney Products
1450 S. 66th St., Milwaukee 14, Wis.
Branch offices in principal cities

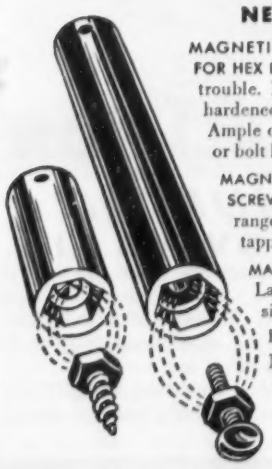
CONTAINERS AND PRESSURE VESSELS FOR GASES, LIQUIDS AND SOLIDS

For more details circle NED-1002 J7 on enclosed inquiry slip

Magna-tip® MAGNETIC SOCKETS

A First Step to Assembly Automation

Speed operations on single or multiple power drivers. Eliminate fumbling and pre-positioning by hand.



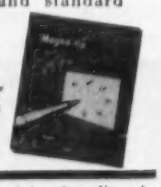
NEW! PATENTED!

MAGNETIC BOLT CLEARANCE SOCKETS FOR HEX NUTS—No moving parts to give trouble. Nut held in socket by cup of hardened steel, never touches magnet. Ample clearance for protrusion of stud or bolt beyond nut. U. S. Pat. 2,714,829.

MAGNETIC SOCKETS FOR HEX HEAD SCREWS—Complete size and drive range in proper hardness for self-tapping and sheet metal screws.

MAGNETIC SOCKETS FOR BOLTS—Large range of opening and drive sizes in standard dimensioned power type sockets.

Nut and bolt magnetic sockets available in easy to load surface drive and standard openings.



WRITE Dept.81-S for manual on the complete line of Magnetic Bit Holders, Finders, Sockets and Hand Screwdrivers. Magna Driver Corp., 779 Washington Street, Buffalo 3, N. Y.

For more details circle NED-1003 J7 on enclosed inquiry slip

New Processes & Materials

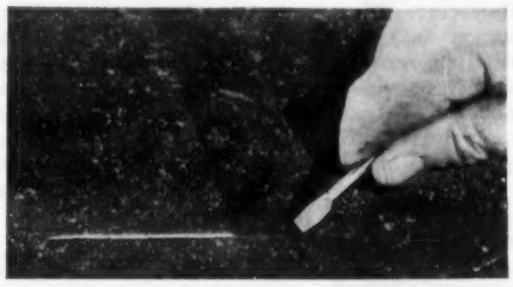
CRUCIBLE & LADLE COATING withstands contractions, expansions

Uniform in particle size and offered in gel form, Cera-Coat for crucibles, ladles, thermocouples and pouring spouts stays in proper solution for many hours after it is diluted for use. Coating withstands contractions and expansions caused by severe temperature variations. Application is by brush or spray. Any metal that solidifies on or in equipment will peel off easily. Surface to be treated is preheated prior to application. Made by **Michael Scott Co.**, Foundry Supply Dept., 4065 Bandini Blvd., Los Angeles 23, Calif.

For more details circle NED-1004 J7 on enclosed inquiry slip

CONCRETE FLOOR HARDENER is colorless liquid treatment

New or old concrete floors are hardened and densified by single treatment of No. 860 concrete floor hardener. This clear liquid penetrates into the con-



crete and is reported to induce chemical action that recrystallizes the floor into a dense, nonporous, hard surface. Resultant floor is dustless, wear resistant and withstands heavy trucking loads and traffic. Hardener is applied with brush or mop and improves concrete's resistance to oil, water and acid. Illustration shows how treated floor withstands scratching with screwdriver, while untreated area is badly gouged. Made by **Monroe Co.**, Dept. M-1, 10703 Quebec Ave., Cleveland 6, O.

For more details circle NED-1005 J7 on enclosed inquiry slip

GLASS EPOXY LAMINATE is flame and heat resistant

Flame retardant properties are combined with high strength and good electrical properties in this glass epoxy laminate. It can be used continuously up to 300° F and intermittently above this temperature. Once removed from a flame, it is self-extinguishing. Plain form is offered for power applications and metal clad form for printed circuitry. Sheets from 0.010 to 1 in. thick are suited for switchgear components, panels, terminal boards, radio and television relays and printed circuits. Made by **Continental-Diamond Fibre Corp.**, Newark 30, Del.

For more details circle NED-1006 J7 on enclosed inquiry slip

THE NEW RELIANCE SUPER 'T'

D-C. MOTOR

WITH **DYNAMIC RESPONSE**

The most revolutionary new motor development in 40 years!

- Higher commutating ability
- Lower mechanical inertia
- Lower electrical inertia
- Moves heavy loads quickly

Write or call for further details.

RELIANCE Super LINE

C 1546-A

RELIANCE ELECTRIC AND ENGINEERING COMPANY
DEPT. 249A, CLEVELAND 17, OHIO • CANADIAN DIVISION: WELLAND, ONTARIO
Sales Offices and Distributors in Principal Cities

For more details circle NED-1007 J7 on enclosed inquiry slip

DEGREASER! machinery shampoo

SPRAY OR BRUSH ON . . .

Takes cling out of oil and grease . . . emulsifies it . . . so that all dirt may be hosed off. Launders engines, lathes, machinery, faster, more completely than steam cleaning. Self scouring action brings out factory new appearance . . . provides accurate visual inspection. Where work will not withstand the use of water for rinsing, we can recommend suitable GUNK replacement. (GUNK is also an excellent paint brush cleaner.) Shipped in concentrated form . . . 55 gal. drum makes 500 gals. heavy-duty Degreaser! Genuine GUNK is sold in bulk sizes at better industrial wholesalers everywhere!

THE CURRAN CORPORATION
(Home Office) South Canal St. LAWRENCE, MASSACHUSETTS — Plants — GUNK Chicago Company Chicago 38 (Licensee)
IMMEDIATE SHIPMENT — 1 PINT OR A TANK CAR

For more details circle NED-1008 J7 on enclosed inquiry slip

Picture of . . . 5 Wheelbarrows

Of course you don't see five wheelbarrows, but you do see one man on a "PAYLOADER" tractor-shovel in a foundry, and the owner says it does as much work as five men with wheelbarrows—handling sand, castings and scrap.

If you are one of those plant owners or managers having trouble finding men to do hard, laborious material-handling work, it will pay you to find out how many of these problems a "PAYLOADER" can help you solve.

The small model pictured has a bucket capacity of 18 cu. ft. or 2,000 lbs. It will unload boxcars and scoop-up, carry, dump and spread at surprisingly low costs per ton. Fork and sweeper attachments are also available to increase its usefulness. Larger units in the complete "PAYLOADER" line (up to 9,000 lb. carry capacity) give proportionately greater production.

There's a nearby "PAYLOADER" Distributor with both sales and service facilities. The Frank G. Hough Co., 746 Sunnyside Ave., Libertyville, Ill.

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PAYLOADER®
MANUFACTURED BY THE FRANK G. HOUGH CO. LIBERTYVILLE, ILL.
SUBSIDIARY—INTERNATIONAL HARVESTER COMPANY
746 Sunnyside Ave., Libertyville, Ill.

For more details circle NED-1009 J7 on enclosed inquiry slip

IF YOU'RE

Handling Coil

CHECK THESE C-F LIFTER ADVANTAGES

- 1 Lifter handles wide range of coil sizes
- Requires minimum of only 10" to 12" between piles — saves storage room
- 1 man operation — eliminates hookers
- Positive grip on coil—no damage to material

• C-F Coil Lifters are saving time and labor in many plants and warehouses because they can pick up, carry and set down a coil of steel faster and safer than any other method. Infinite jaw openings permit handling a very wide range of coil widths . . . carrying legs open fast, stay open until operator closes them on coil. Narrow legs require minimum space between piles—a space saving advantage. Made in motorized models for crane cab or pendant operation as well as manual types with chain wheel, in capacities from 3 tons up. Powered Rotating Heads available. Opening ranges to suit your requirements.

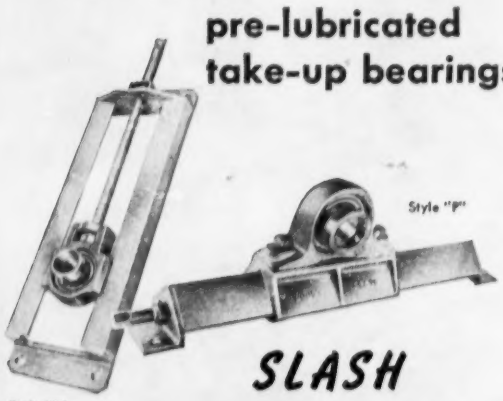
Write for illustrated Bulletin.

CULLEN-FRIESTEDT CO.
1304 South Kilbourn Avenue • Chicago 23, Illinois

For more details circle NED-1010 J7 on enclosed inquiry slip

new...

pre-lubricated take-up bearings



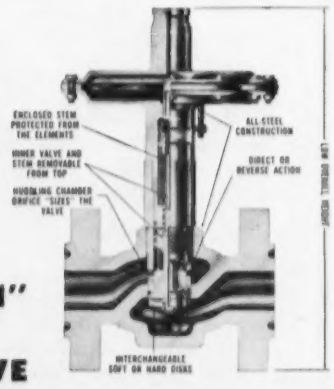
SLASH maintenance costs

Pre-Lubricated At Our Factory For Life • Seals Lubricant In—Dirt Out • Standard Series Ball Bearings • Self-Aligning • Frames of Welded Structural Steel • Can be Operated in Tension or Compression

T. B. WOOD'S SONS COMPANY
CHAMBERSBURG, PA.

Cambridge, Mass. Newark, N. J. Dallas, Texas Cleveland, O.

For more details circle NED-1011 J7 on enclosed inquiry slip



TYPE "DCB-1" MOTOR VALVE

Check this valve closely if you need automatic control of high pressure liquid or gas. It features a pressure-balanced disk that permits pressures to 10,000 psi to be controlled with one diaphragm @ 40 psi supply air. Valve positioners are not required . . . bubble-tight closure is guaranteed.

Catalog No. 256 MVC contains complete information on this and many other GOT Motor Valves. Write for your copy today.

Garrett Oil Tools, Inc.
P. O. BOX 2427 • LONGVIEW, TEXAS

USI DIVISION OF U. S. INDUSTRIES, INC. New York, N. Y.

For more details circle NED-1012 J7 on enclosed inquiry slip

New Literature & Catalogs

Air Cleaner-Dryer

Logan Engineering Co., Aridifier Div.—How the Aridifier mechanical air cleaner removes 92 per cent of all oil, moisture and dirt from compressed gas and air lines is explained in 8-page catalog 357. Capacities of these cleaner-dryers range to 22,000 cfm and 200 psi. Tables give pressure drops, cost of air leaks and typical air requirements of pneumatic tools and equipment.

For more details circle NED-1013 J7 on enclosed inquiry slip

Teflon Gaskets & O-Rings

Crane Packing Co.—Gaskets, back-up rings and O-rings made of Du Pont Teflon are impervious to most acids, alkalies, corrosives and solvents at temperatures from −120 to 500° F. Details of a full range of standard sizes for all commercial and AN requirements are contained in illustrated bulletin P-327.

For more details circle NED-1014 J7 on enclosed inquiry slip

Wire Cloth for Every Purpose

Cambridge Wire Cloth Co.—Engineering and application data on the complete line of Cambridge wire cloth, screens and wire cloth products are presented in 94-page 1957 catalog. Typical applications, available types and sizes, and metallurgical information are covered on wire cloth and screen made of practically any metal or alloy.

For more details circle NED-1015 J7 on enclosed inquiry slip

Air Engineering

Aerovent Fan Co.—Helpful tables for estimating air handling requirements, entrance and elbow losses and duct sizes are found in 34-page air engineering data file E-57. Engineering and test facilities for propeller fans, specifications, construction, maintenance and installation are covered. Also included are much other basic data, plus special application equipment.

For more details circle NED-1016 J7 on enclosed inquiry slip

Wrenches & Car Movers

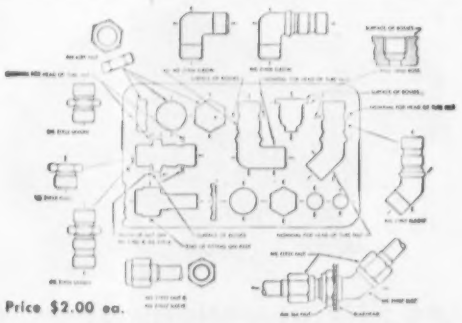
Lowell Wrench Co.—Details of reversible ratchet gear and socket wrenches, Warnock and Simplex strip wrenches, Swaco hopper car wrenches and Swaco safety railroad car mover are found in 12-page illustrated catalog 61. Information on special wrenches and a table for figuring the correct size wrench to fit any bolt or nut diameter also are included.

For more details circle NED-1017 J7 on enclosed inquiry slip

Ground Alarm

Excel Electric Service Co.—How and why the Allen ground alarm takes guesswork out of detecting dangerous, costly faults on ungrounded and modified grounded electrical distribution systems is related in 8-page illustrated bulletin GI 574-2. Basic electrical data with wiring diagrams are included, along with device specifications.

For more details circle NED-1018 J7 on enclosed inquiry slip



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NOW — MS FLARELESS FITTINGS HAVE A DRAFTING TEMPLATE

Announcing a brand new time-saving template series for the hottest current item in hydraulics — MS flareless tube fittings. No more trial and error designing. Five templates are available. No. 96 has 3/16" and 5/16" tube sizes; No. 97, 1/4" and 3/8"; No. 98, 1/2", No. 99, 5/8"; No. 100, 3/4". Like Twomey's AN Fluid Fittings templates, these are designed by Douglas Aircraft Co., Inc. Full instructions on template envelope. For data on line of electrical, hydraulic, tooling, nut & bolt, lettering, sheet thickness, circle and ellipse templates . . .

WRITE FOR FREE CATALOG INFORMATION.

Drafting Templates for All Purposes

DEALER INQUIRIES INVITED

E. F. TWOMEY CO. Inc.
726 W. 10th Place
Los Angeles 15, Calif.

For more details circle NED-1019 J7 on enclosed inquiry slip

GET THESE TWO USEFUL MANUALS TODAY

Design engineers will find both these GRAMIX engineering bulletins extremely helpful. No. 18 covers design, metallurgical requirements, and alloy selection factors for GRAMIX bearings. No. 19 covers GRAMIX Machine Parts. Both are packed with information that every engineer should have to take full advantage of the GRAMIX process. Write for your copies today.

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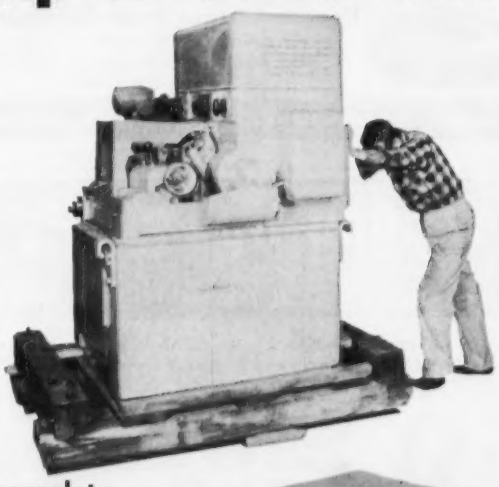
THE UNITED STATES GRAPHITE COMPANY
DIVISION OF THE WICKES CORPORATION • SAGINAW 10, MICHIGAN

For more details circle NED-1020 J7 on enclosed inquiry slip

EVERYTHING YOU NEED

to MOVE ANY LOAD up to 6000 lbs.



A complete moving system for only **$136.00**

MULTITON JUNIOR MOVING KIT

One or two men can move machines, crates and loads of any shape over rough surfaces, around corners, into tight quarters, with the MULTITON JUNIOR MOVING KIT.

Comes in its own 13½" steel case that tucks into your storeroom shelf when not in use.

Built for years of trouble-free operation, MULTITON JUNIOR can return its low cost in solving just one moving problem.

WRITE FOR COMPLETE ILLUSTRATED FOLDER
(For loads over 6000 lbs. ask about the MULTITON MARK 4, 5 or 6)

STOKVIS • EDERA & CO., inc.
Dept. NE-9, 18 Secatoag Avenue, Port Washington, N. Y.

For more details circle NED-1021 J7 on enclosed inquiry slip

INDUSTRIAL's new concept of one-at-a-time retaining ring dispensing, introduced seven years ago, has been saving time, labor and dollars on assembly lines here and abroad. If you are using bulk-packed open-type rings, we guarantee to cut your assembly costs with INDUSTRIAL Stacked Retaining Rings. One motion gets each ring from the stack to any grooved shaft. Send for free catalog and ring samples. U. S. Patent 2,650,722

IRR *Originators of modern retaining ring dispensing*

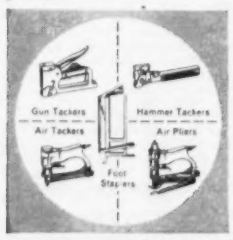
INDUSTRIAL RETAINING RING COMPANY
Dept. N9, 57 Cordier Street • Irvington 11, New Jersey
For more details circle NED-1022 J7 on enclosed inquiry slip

Tough jobs are easy with DUO-FAST Air-Powered Staple Tackers

The skill is built-in!

Even inexperienced workers do a better job faster with DUO-FAST Automatic Air Tackers. A flick of the trigger . . . and air does the rest. Drive up to 3 staples a second. Extended front lip gives you pin-point accuracy.

Free Service. DUO-FAST tool above is one of 150 staple-tacking models. All carry a Free Service Guarantee.



Send today for free Bulletin FT-27 on DUO-FAST Automatic Air Tacking. Write *FASTENER CORPORATION, 3758-60 River Road, Franklin Park, Ill.*

DUO-FAST
Staplers • Tackers • Staples
7169

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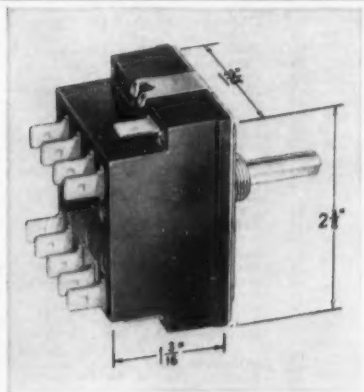


NEW SORENG ROTARY SELECTOR SWITCH Offers Unique Advantages

Features of Rotary Selector Switch:

- Two SPDT and three SPST switches
- Shaft actuated push-pull switch
- Positive indexing up to eight positions
- Snap action provided by spring loading
- Silver plated spade terminals with bussing available between any combination of terminals
- Rated 10 amp., 125/250 V. A.C.; ½ h.p., 125/250 V. A.C.
- Listed by Underwriter's Laboratories

For other features and complete information, write for Bulletin on Model 776.

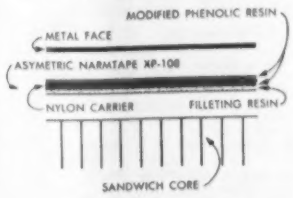
CONTROLS COMPANY OF AMERICA
Manufacturers of *SORENG* controls
9577 SORENG AVENUE • SCHILLER PARK, ILLINOIS

For more details circle NED-1024 J7 on enclosed inquiry slip

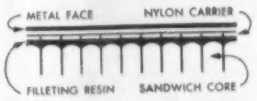
New Processes & Materials

STRUCTURAL ADHESIVE eliminates need for core priming in aircraft sandwich fabrication

Reportedly the first asymmetric structural adhesive offered to the aircraft industry, Narmtape XP-108 eliminates the need for core priming in sandwich component fabrication. It consists of a nylon carrier impregnated with modified phenolic resin and over-coated on one surface with a highly mobile filleting resin.

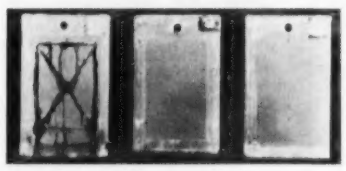


Filleting action of adhesive enables it to provide added contact area to the vertical columns of a sandwich core. This reportedly improves peel strength and other mechanical properties of the completed face-to-core bond. Adhesive also displays outstanding tensile, shear, and column compression properties, as well as high flexural strength. It resists aircraft fuels, salt spray, commercial solvents, and other corrosives. Developed by **Narmco Resins & Coatings Co.**, Dept. N-11, 600 Victoria St., Costa Mesa, Calif.



For more details circle NED-1025 J7 on enclosed inquiry slip

PROTECTIVE PAINT SYSTEM prevents corrosion of metals, yet allows use of attractive colors

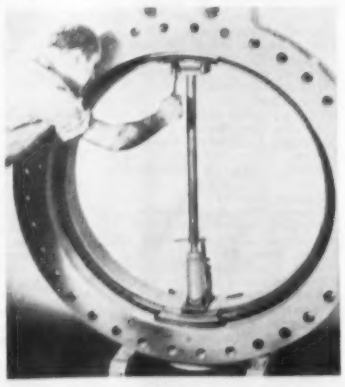


Formulated specifically for air conditioning equipment and components so that exterior parts now made of galvanized steel can be offered in attractive colors, two-coat paint system affords durable protection against rust, corrosion and weather. The paint system has been accepted by Underwriters' Laboratories for use on exterior steel enclosures of air conditioning equipment which is then subject to UL-listing of the complete fabrication.

System is also suitable for use on other steel fabrications where appearance and durability are factors. Its use is limited only by the fact that it requires baking. A mono-bake is used, though separate baking for the primer is optional, as is flocoat primer application. Illustration shows three panels which have been finished with the two-coat paint system and then exposed to a salt fog from a 20 per cent saline solution for 2640 hours. Panel on the left was mechanically scored to the bare metal. System developed by **Arco Co.**, Dept. N, 7301 Bessemer Ave., Cleveland 27, O.

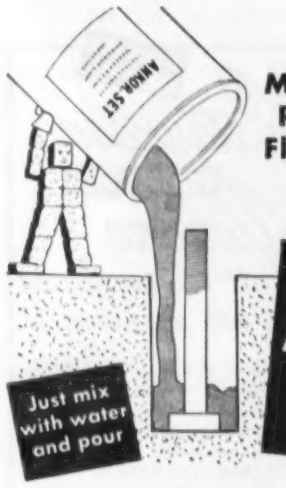
For more details circle NED-1026 J7 on enclosed inquiry slip

RUBBER-TO-METAL ADHESIVE bond is stronger than rubber itself



Adhesive for bonding cured natural or synthetic rubber to metal provides a bond so strong that the rubber will tear before it can be peeled from the metal. Cured in 24 hours at room temperature, the Ray-Bond R-86001 adhesive reaches maximum strength after seven days. Immediate maximum strength is obtained after a 4-hour cure at 120-140° F, with no oven required. Rubber linings under peel or shear stress can be bonded for use up to 100° F. Dielectric strength is 400 to 450 v per millimeter. Bond withstands corrosive acids. Use can also be in bonding metal, glass, ceramics, or wood to metal, and as a protective coating, sealing, and casting compound. Photo shows use for bonding renewable rubber liner to inside of butterfly valve body. Made by **Raybestos-Manhattan, Inc.**, Adhesives Dept. 177, Bridgeport 2, Conn.

For more details circle NED-1027 J7 on enclosed inquiry slip



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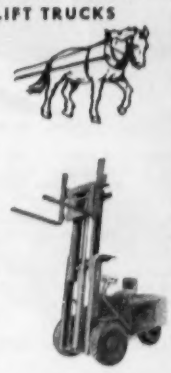

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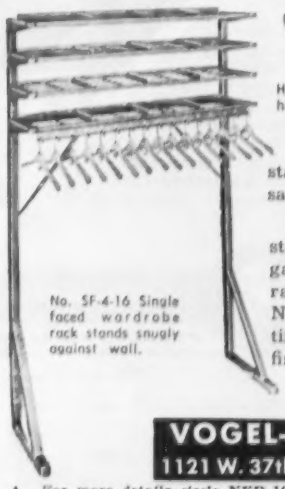

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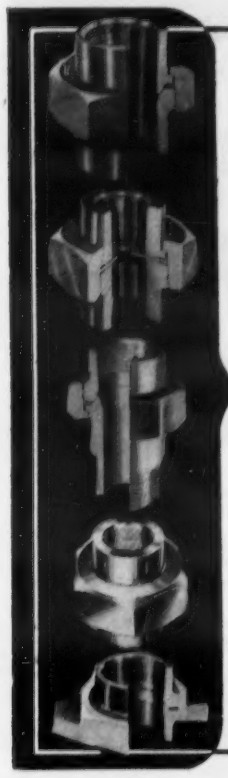

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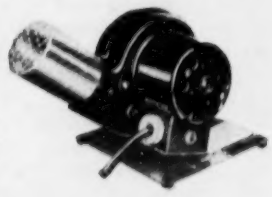

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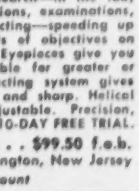

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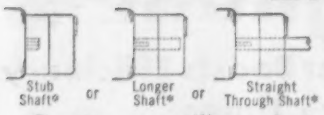

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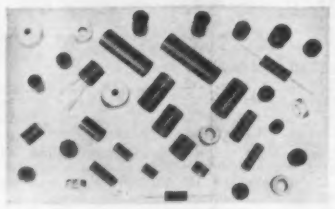

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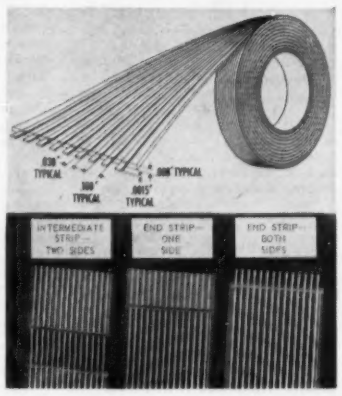

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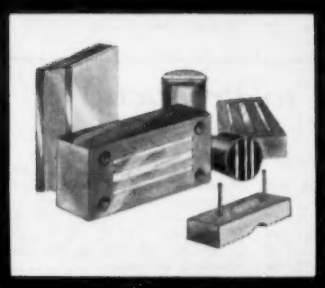

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